The Golden Hands Encyclopedia of

CRAFTS

The complete guide to
traditional and modern home crafts

Volume 23

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Golden Hands Encyclopedia of
CRAFTS

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Marshall Cavendish

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Flowers and plants 14. Skeleton leaves can be bought at Pulbrook & Gould, 181 Sloane St, London SW1.

Upholstery 14. Upholstery materials at Grant Baxell, 195A Upper Richmond Rd, London SW15 who also offer mail order service.

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Paper 66. Toys available from Galt Toys, 30 Gt Marlborough St, London W1. Visors and caps at Fenwicks (see under Bobbin lace). Shirts by Simon, available at branches of Miss Selfridge and Top Shop. Giant playing cards at Knight Games, 33 Old Compton St, London W1.

Paper 67. Scraper boards and tools from Fred Aldous Ltd, The Handicraft Centre, PO Box 135, 37 Lever St, Manchester M60 1UX (mail order also and price list on request) and from many art and craft shops and some stationers.

Weaving 30. Weaving equipment and yarn at Handweavers Studio & Gallery, 29 Haroldstone Rd, London E17 7AN who also offer mail order service. Damask fabric at Afia (Fabrics) Ltd, 85 Baker St, London W1.

Weaving 31. Soft, thick laine à broder from DMC distributed in UK by C & F Handicrafts Supplies, 346 Stag Lane, London NW9 who will give names of nearest stockists. Turkey rug wool at Harrods, Knightsbridge, London SW1X 7XL and other wool suppliers.

Wax 11. All equipment at Candle Makers Supplies, 28 Blythe Rd, London W14.

Paint 38. Tractol, plynole and emulsion paint at Rolls & Co Ltd, Claverings Industrial Estate, London N9.

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Bobbin lace 1. Lace-making requisites at E Braggins & Sons Ltd, 26 Silver St, Bedford MK40 1SX (mail order service); Mace & Nairn, 89 Crane St, Salisbury, Wilts SP1 2PY and The Needlewoman Shop, 146 Regent St, London W1 who also offer mail order service. Hand-made wooden bobbins by mail order from Nottinghamshire County Council, Social Services Dept, Work Project Centre, 108A Mansfield Rd, Notts. Evening bag, bracelet and watch from Chainani Antiques, Stall 72, Chelsea Antiques Market, King's Rd, London SW3. Perfume bottle from Betty Campian, Stall 71, Chelsea Antiques Market. Blouses at Essences, 410 King's Rd, London SW10. Skirts at Laura Ashley, 9 Harriet St, London SW1 and branches.

Bobbin lace 2. Blue skirt from a selection at Fiorucci, 15 Brompton Rd, London SW3 1ED. Bodice from a selection at Fenwicks, 63 New Bond St, London W1. Petticoat from Laura Ashley, 9 Harriet St, London SW1 (we applied the lace).

Printing 25. Coloured typewriter ribbon at any branch of Rymans.

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Embroidery 22. Blouse at Laura Ashley (see under Bobbin lace). Basket at The Neal Street Shop, 29 Neal St, London WC2. Clogs at Dolcis.

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Carpentry 29. Hardware at Woodfit Ltd, Whittle Low Mill, Chorley, Lancs PR6 7HB (mail order only). Tools and materials at timber merchants and DIY stores.

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Metrication

In this volume you will find two systems of measurement. The first set of figures refers to the metric system and the Imperial figures follow in brackets. Wherever possible, a commonsense approach has been adopted and both sets of measurements have been worked out in round numbers. **BUT BEWARE!** This means that metric and the Imperial figures are *not* equivalent so make sure you only work with one or other set of figures.

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Creative ideas 88

Opening pictures

Spring a surprise by opening the front of these pictures to reveal two totally different scenes.

As an exercise in relatively simple carpentry techniques these three-dimensional pictures should pose few problems.

For each picture you will need:

A piece of softwood about 200mm x 12mm (8″x $\frac{1}{2}$″), 18cm (7″) long.

Hand saw, Surform, fine grade glasspaper, vice or G-clamp.

Four 1.2cm ($\frac{1}{2}$″) hinges with corresponding screws.

Assorted emulsion and poster paints, paintbrushes.

Felt-tipped pens.

Wood glue for Punch and Judy picture.

2.5cm (1″) chisel and mallet for window picture.

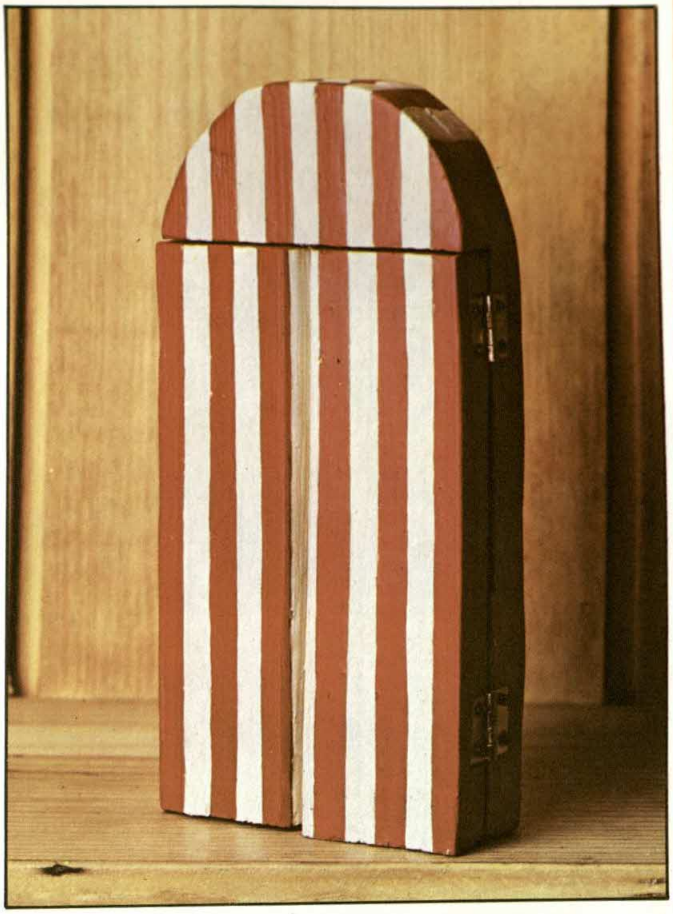
For the window picture saw softwood into half exactly. Then divide one of these halves down the centre to obtain two equal front pieces.

For the Punch and Judy picture cut the back piece taller than the sides. Around this extra height cut five straight sides with a saw. Use the Surform to shape these sides to a curve. Smooth with glasspaper. Cut out and stick an identically curved piece on to the back piece, so that it juts out over the characters.

For the window picture use the chisel and mallet to score lines round the outside of the window frame. Gouge out about 2mm ($\frac{1}{16}$″) in depth, inside these lines. Similarly score and gouge out each of the four window panes—again to a depth of 2mm ($\frac{1}{16}$″).

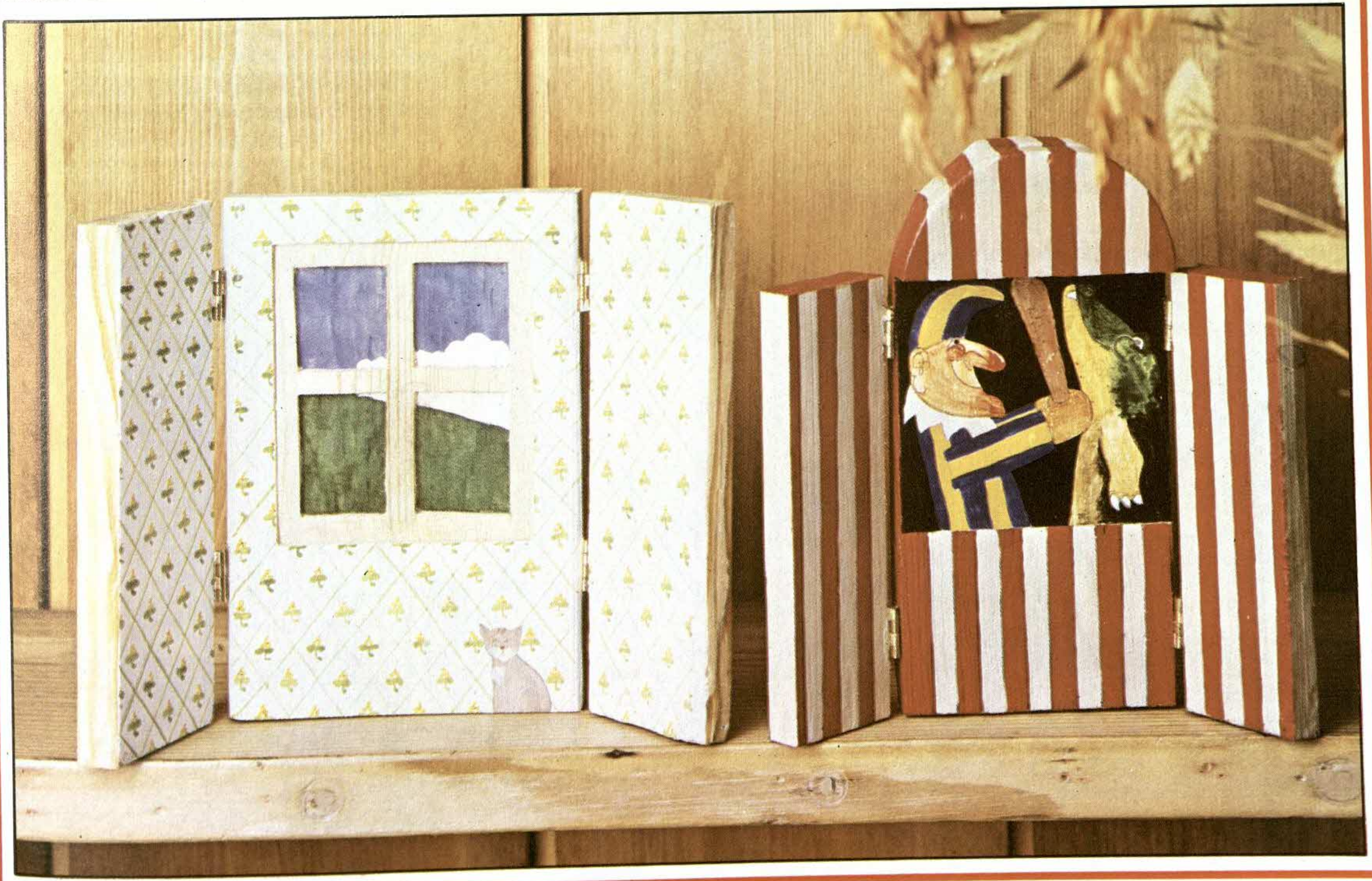
Paint pictures with emulsion paint for background wash or bold stripes. Use poster paint for the Punch and Judy characters, window view and cat. Pick out very fine details with felt-tipped pens. In contrast leave the window frame natural.

Attach hinges so that fronts fit flush when closed across the picture.



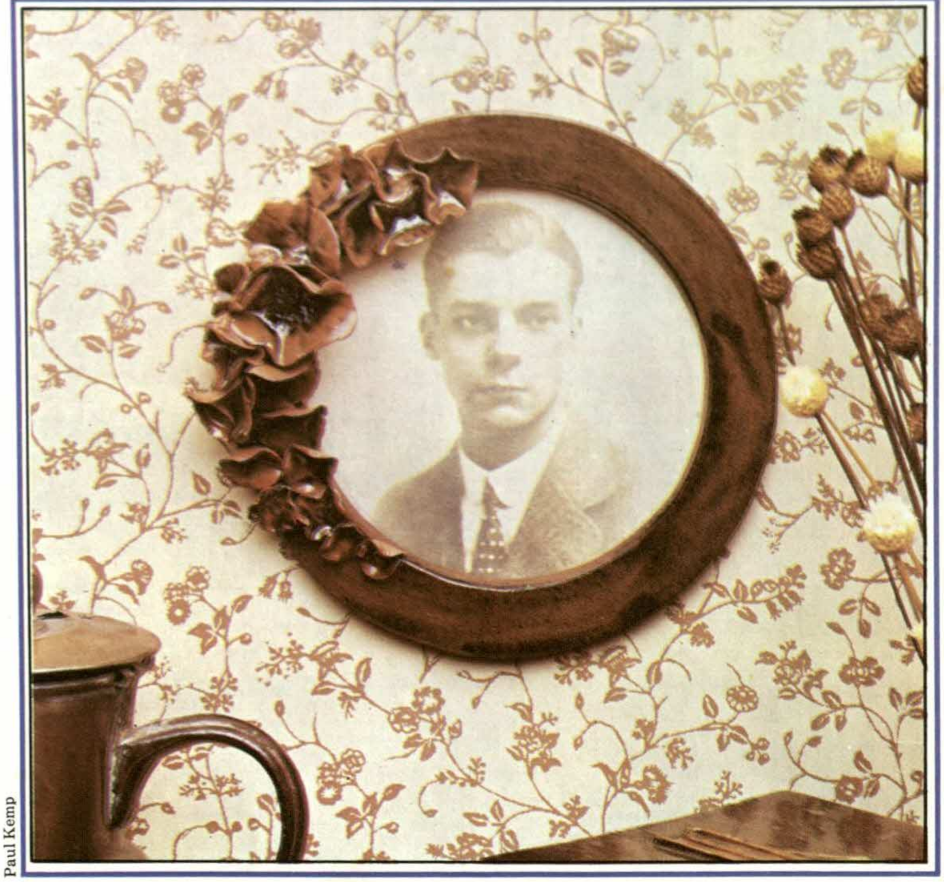
Above: the picture is concealed by side flaps.

Below: both scenes revealed. Designed by Roy Liu.



Paul Kemp

Working with porcelain



Paul Kemp

Porcelain flowers add a delicate touch to frames made in previous chapter.

Porcelain clay is more difficult to work with than stoneware or earthenware clay because it is of a much finer texture. It dries faster and cracks if you fail to keep it soft. It is also fragile in all its working stages and must be handled gently. Good results, however, have a delicacy of form which cannot be achieved with other types of clay.

If you decide to use porcelain clay it is a good idea to play around with the clay, making small items, and gradually getting used to the feel of it. Porcelain powder should be mixed with water until it is of a putty-like consistency. It should be worked wetter than other clays and, because of its tendency to dry out quickly, it is a good idea to keep it in an air-tight dish and take out the required amount as you need it.

Making small items

Try making porcelain flowers which can be used to decorate clay picture frames (Clay chapter 52, page 2446) or which can be glued on to brooch blanks, hair grips or ceramic napkin rings. Experiment with some porcelain miniatures.

You will need:
1kg (3lb) porcelain china clay.
1 teaspoonful each of copper and cobalt oxide.
Stoneware glaze.
Tin glaze.
Strong glue such as Araldite rapid.
Glass mosaic for enamelling (optional).
Paintbrush and water.
Wooden toothpicks and rolling pin.
Small penknife.
Wooden board on which to roll clay.
Ruler.

Porcelain flowers can be made with a small piece of clay rolled into a ball about half the size of a marble.

☐ Holding the clay between the first finger and thumb, put the head of the toothpick into the centre of the ball of clay.

☐ With a dragging and pressing movement, pull the toothpick out again.

☐ Turn the ball of clay with each movement and keep it damp with the paintbrush dipped in water.

This will give you a cone shape with the petal marks on the inside of the flower.

☐ When the flower is complete, turn it upside down on your little finger and roll a wooden toothpick lightly across the base of the flower to make it flat.

☐ Make as many flowers as you need, plus a few extra in case of accidents during firing.

Leaves should be made in proportion to the flowers.

☐ Press a small piece of clay between your finger and thumb, shaping the ends into points.

☐ Make the vein lines on the leaf with the end of a toothpick.

☐ Gently twist and bend it into a leaf shape.

☐ Biscuit fire flowers and leaves.

Colouring flowers can be done in one of two ways. The first is to use oxides.

☐ Mix the oxide with water. Remember that the oxide is very strong so only a touch of powder is needed.

☐ Dab the colour into the centre of the flower or on to the petal edges.

☐ Let it dry.

☐ Apply glaze with a paintbrush.

The second way of colouring the flowers is to use the tiny pieces of glass mosaic designed for enamelling.

☐ Use a tin glaze and drop a glass mosaic into the centre of each flower.

☐ When placing the flowers in the kiln, make sure they stand upright or the glass will spill out.

Fixing the flowers to another porcelain surface is very easy.

☐ Glue them securely in place with strong glue.

A napkin ring can be made quite simply with very little porcelain clay.

☐ Roll out a sausage of clay about 20cm (8″) long.

☐ Use a wooden rolling pin to press the sausage flat.

☐ Use the knife and the straight edge of the ruler to cut a strip of clay 2cm (¾″) wide and 13.6cm (5¼″) long.

☐ Lift the clay off the work surface, place it on its edge, and curve it around to form an oval shape.

☐ Wet and roughen the ends and press them together.

☐ With the knife add a little wet clay to the front and the back of the join and smooth both sides of the join.

☐ Leave the ring to dry.

☐ When it is dry you can smooth any rough edges by scraping them gently with a knife.

☐ Biscuit fire the ring.

☐ When cool, glaze it, leaving the base free of glaze so that you can sit the ring on the kiln batt without it sticking.

☐ Glaze the inside of the ring so that it will be smooth.

☐ Glaze fire the ring.

Flowers and leaves can be attached to the ring with strong glue.

Make a set of napkin rings and vary the design of the leaves and flowers for each. Each person will then be able to recognize his or her own napkin ring.

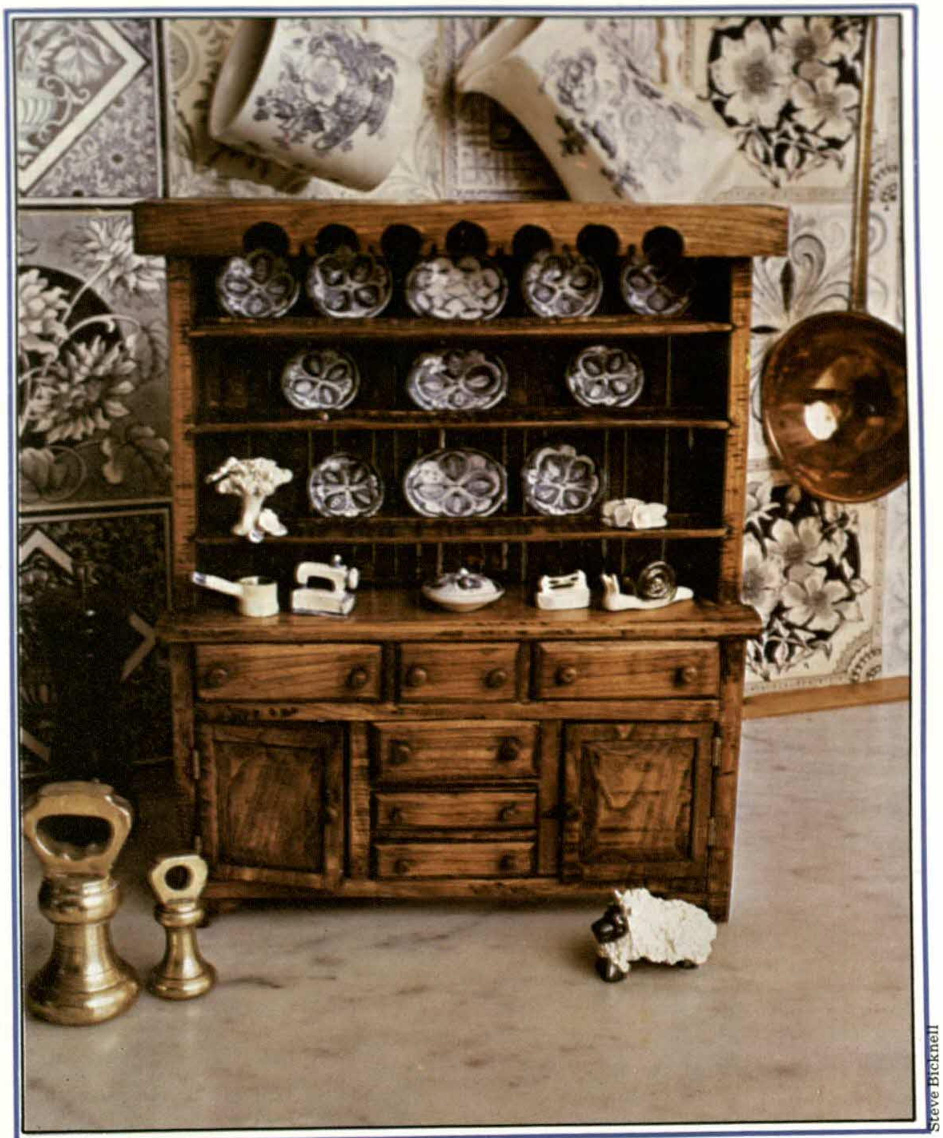
Miniatures

Once you have got used to handling the material, you can try making porcelain miniatures.

Remember to keep the clay soft. Make as much of the article as you can in the soft clay, but the smoothing of rough areas and the application of fine detail can be done when the clay is leather-hard and, later, when it is dry.

Useful tools for working porcelain are sewing needles to cut wet clay and for fine detail work on dry clay; jewelry needle files; a small brass brush to clean the files; toothpicks and penknife; fine sandpaper; a paintbrush and water to smooth areas which are hard to reach any other way. A small sieve is also handy. You can press the clay through the sieve to give an interesting texture to form leaves, grass, hair or fur (see Clay chapter 39, page 1798).

You can apply oxides to pick out details on the miniatures.



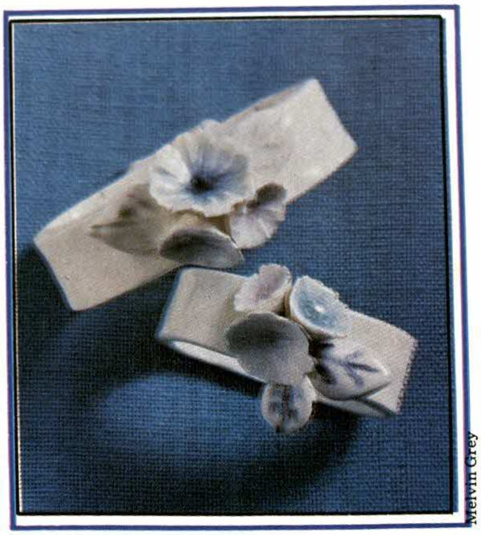
Steve Bicknell

Below: ceramic napkin ring decorated with coloured flowers is a natural match for table china. The flowers are made separately and glued on.

Steve Bicknell

Above: miniature figures such as the utensils and animals shown on this doll's house dresser are good projects for beginners in porcelain.

Below: detail of napkin ring flowers. Designs by Patricia de Menezes.



Melvin Grey

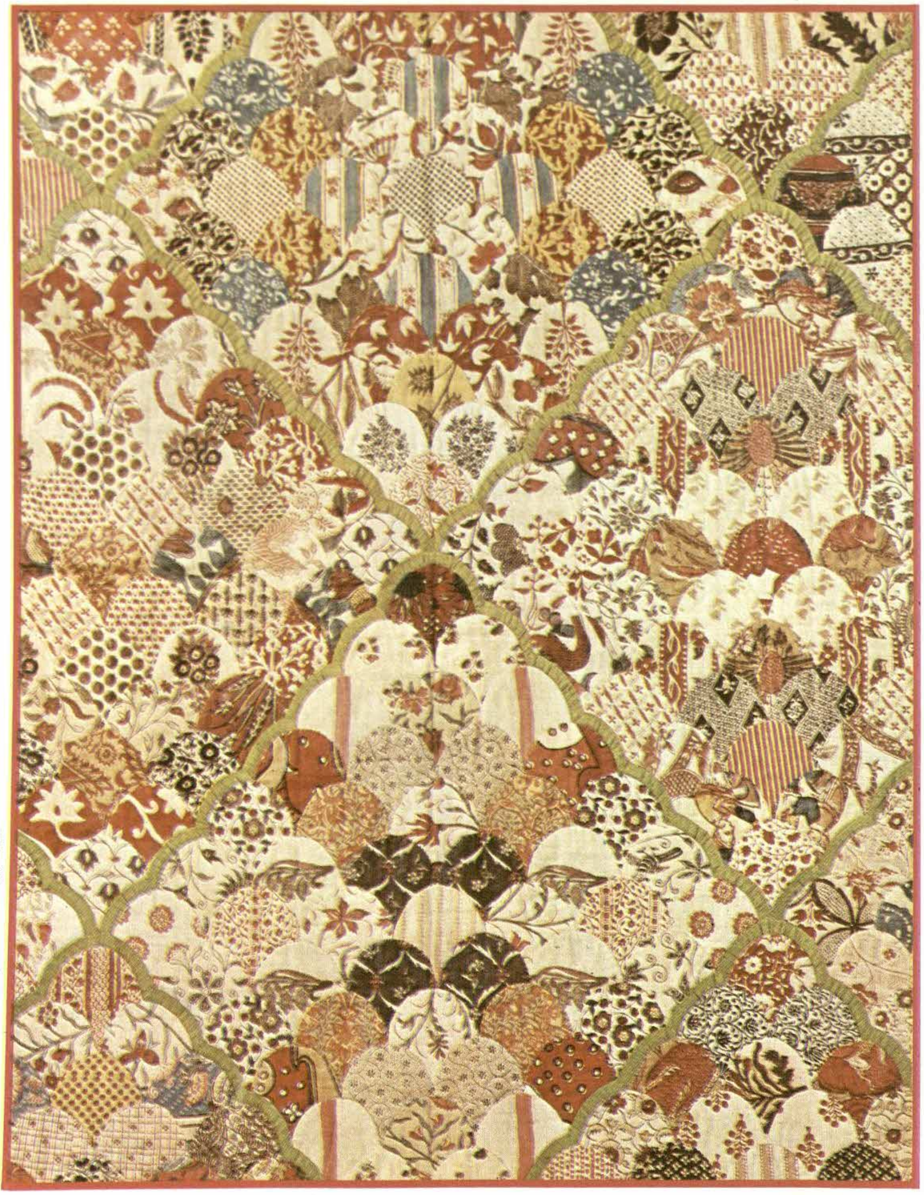
Clamshell patchwork

Cloth — patchwork 10

The earliest known examples of Clamshell or Shell patchwork—so called because of the obvious similarity of each patch to a shell—date from the end of the 18th century. It is sometimes known as Fish-scale patchwork because the overall pattern it creates resembles the overlapping scales of a fish.

Clamshell is one of the most difficult methods of patchwork to master. It is probably for this reason that it has never been very popular, although the shell pattern is common in both embroidery and quilting designs. Contemporary examples of Clamshell patchwork are extremely rare.

Clamshell patches are semi-circular in shape with a concave section cut away on each side to form a narrow stem at the base. Traditionally, the patches are assembled in overlapping rows. The method by which the patches are sewn together differs from most other patchwork in that they are joined by hem stitching on the surface of the fabric as in applied work.



Victoria and Albert Museum, Crown Copyright

Note the subtle choice of prints in this beautiful piece of late 18th century English Clamshell patchwork.

It is the care needed in turning under the curved convex edges so that the patches lie flat, and the meticulous attention to neatness in the final stitching, that make this method of patchwork so difficult.

Once these problems have been conquered with practice, however, Clamshell patchwork can produce highly decorative results which justify the time and patience involved.

Fabrics

It is even more important to use firmly woven fabrics in Clamshell patchwork than in any other method of patchwork. All the patches must be cut on the straight of the grain. Thus much of the convex edges of the patches will be on the cross of the fabric and the resulting 'pull' affects the overall work more than in other geometric shapes. It is for this reason that it is so vital to use firmly woven fabrics that will not distort the shapes.

Design

Clamshell patches cannot be used with any other shape, since no other shape will fit in. Design possibilities are therefore limited. However, the shell pattern is in itself an extremely pleasing one, with its soft fluid lines.

There is equally little scope for design in the arrangement of patches since the overall pattern is built up by working one row at a time until the work reaches its required length.

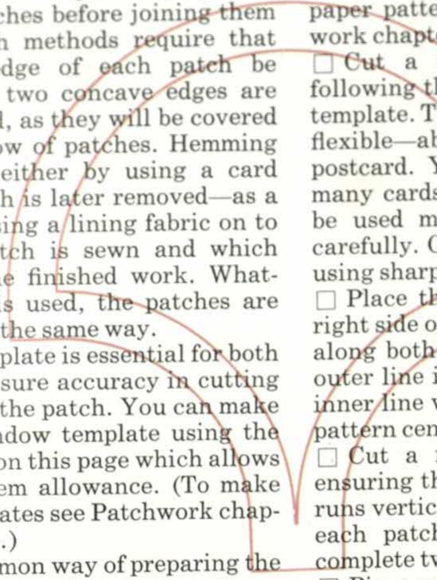
There is, however, a chance for individual design in the colour scheme. Since the emphasis must be placed on the curving lines of the pattern, these should be well defined by the use of contrasting colours.

By using one colour and white, or light and dark shades, all kinds of stripes—horizontal, vertical and diagonal—can be produced, depending on the relationship of contrasting colours. 'V' shapes—upright and inverted—and undulating waves can also be obtained, while bands of colours going right through the spectrum to achieve a rainbow effect can look very grand on a large piece of work.

Thus, while at first glance it may seem that the design of Clamshell patchwork is so simple that it does not require a great deal of thought, it is clear on reflection that careful planning and consideration for the overall design are of great importance if a messy random effect is to be avoided. As in all patchwork where an overall pattern is intended, check that you have sufficient fabric to complete the article.

Preparation of patches

There are two ways of preparing Clamshell patches before joining them together. Both methods require that the convex edge of each patch be hemmed. The two concave edges are left unhemmed, as they will be covered by the next row of patches. Hemming can be done either by using a card pattern—which is later removed—as a guide or by using a lining fabric on to which the patch is sewn and which remains in the finished work. Whatever method is used, the patches are then joined in the same way.



A window template is essential for both methods to ensure accuracy in cutting and hemming the patch. You can make your own window template using the trace pattern on this page which allows a 6mm ($\frac{1}{4}$") hem allowance. (To make window templates see Patchwork chapter 3, page 208.)

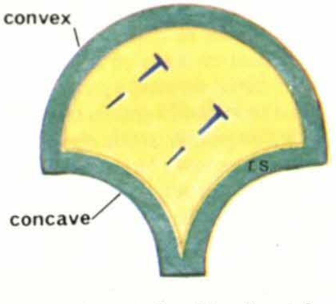
The most common way of preparing the patches is to use cards as inner patterns for the finished shapes. Note that this method is not the same as that using paper patterns as described in Patchwork chapter 2, page 183.

☐ Cut a number of card patterns following the inner line of the window template. The card used should be fairly flexible—about the thickness of a postcard. You do not need to cut as many cards as patches since they can be used many times over if treated carefully. Cut each shape individually, using sharp paper cutting scissors.

☐ Place the window template on the right side of the fabric and trace lightly along both outer and inner lines. The outer line is the cutting line while the inner line will help in placing the card pattern centrally on the patch.

☐ Cut a number of fabric patches, ensuring that the straight of the grain runs vertically parallel to the centre of each patch. Cut enough patches to complete two rows of the work in hand.

☐ Pin a card pattern to the centre of a patch, on the right side of the fabric, following the guideline (fig.1). It is advisable to use silk dressmaking pins that will not leave a hole in the fabric when removed. Two pins, placed diagonally, will hold the card and fabric together firmly. If using very delicate fabric that is easily damaged by pins, place a single pin in the lower half of the patch which will later be hidden by the next row of patches.



Coral Mula

1. *Pin card to right side of patch.*

Clamshell tea-cosy—a traditional design with a modern application.

© Marshall Cavendish/Tubby

☐ Holding the patch and card with the wrong side of the fabric uppermost, turn the 6mm (¼") seam allowance to the wrong side of the fabric along the convex curve (fig.2). Follow the outline of the card pattern as a guide. The hemmed edge should lie exactly level with the edge of the card.

☐ Tack the hem, taking in the fullness of the fabric with small regular pleats. Bulky irregular pleating must be avoided if the new outline is to be smoothly curved. Use small regular tacking stitches, bringing the thread over each pleat to keep it in place (see fig.2). Use fine sewing needles that will not make large holes in the fabric. Do not sew the patch to the card.

☐ Unpin and remove the card pattern.

☐ Repeat the process until enough patches have been prepared to complete two rows of the work.

Card patterns may be re-used until they become too soft. They will last longer if the pins are always placed in the same holes.

Alternative method

The other method of preparing patches requires the use of a lining fabric which then forms part of the finished work. This method obviously results in heavier, bulkier work. It should therefore only be used for articles that will benefit from this extra weight, such as curtains or a wall hanging.

☐ Using the inner line of the window template, cut out a number of shapes in lining fabric such as calico, as for the card patterns. This time, however, as many patterns are needed as patches.

☐ Cut out patches as for the previous method—this time marking the inner guideline on the wrong side of the fabric. Again, cut sufficient patches to complete two rows of the work.

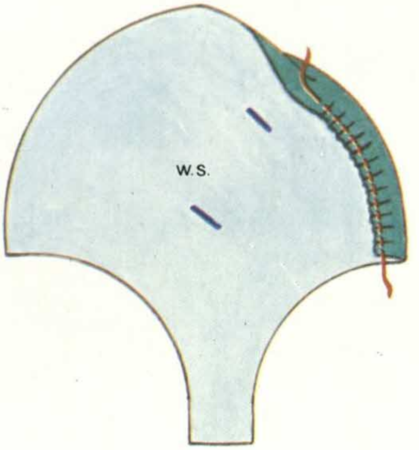
☐ Pin the lining patch centrally to the wrong side of the patch.

☐ With the lining uppermost, turn the seam allowance of the patch along the convex edge on to the lining so that the new curve of the patch matches the outline of the lining exactly (fig.3).

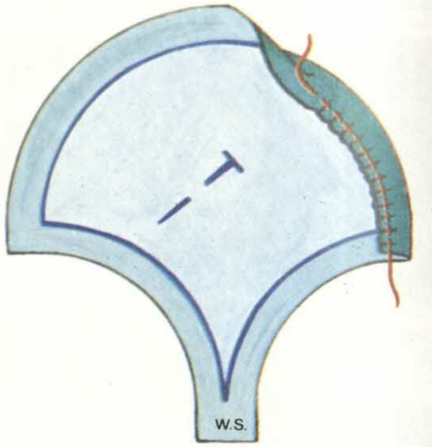
☐ Tack the hem, taking pleats as for the previous method. The tacking stitches should go through the lining fabric but they should not go through to the right side of the patch as they will remain in the finished work.

☐ Remove the pins as you complete each patch.

Choose fabrics carefully for a Clamshell bodice to complement a dress.

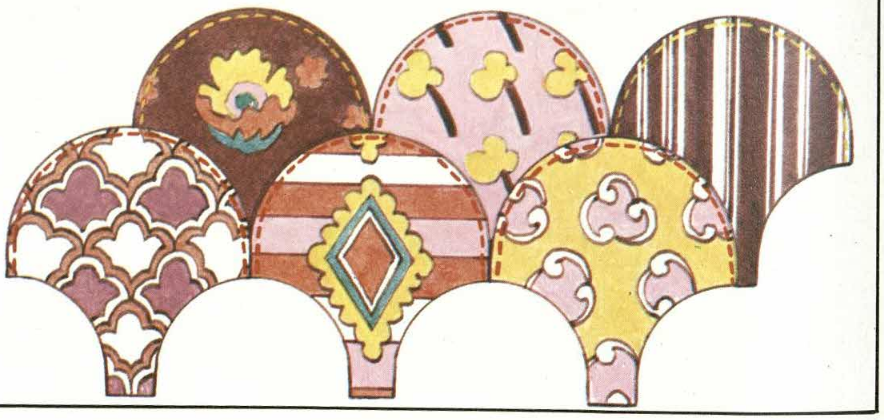


2. *Turn hem to wrong side and tack.*



3. *Tack hem of patch to lining.*

4. *The correct positioning of first two rows of Clamshell patches.*



Coral Mula

Assembly

The patches are joined in the same way, whatever method was used for hemming.

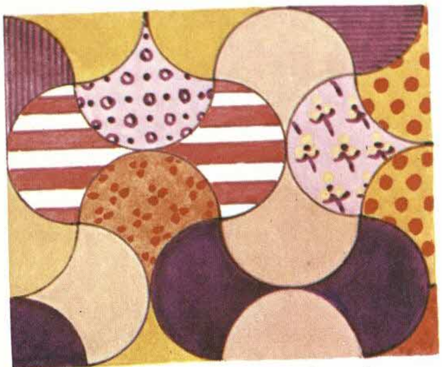
☐ Lay the first row of patches on a flat surface, preferably cork or soft board into which pins can be stuck. Following fig.4, arrange the patches so that the sides of each patch are just touching and the tops of the convex curves lie in a straight line. Lay them against a ruler to check this or stretch a piece of string tautly across the board, anchoring it at each end with pins.

☐ Push a pin through each patch to hold it in place when it has been aligned correctly.

☐ The second row of patches should then be placed in position—overlapping the first row. The patches should overlap the ends of the hemmed edges of the first row by 6mm (¼") and also cover the unhemmed edges of the first row completely. The top centre of each patch in the second row should be in line with the join between patches in the first row (see fig.4).

Add patchwork trimmings to any simple garment for a touch of gay originality

© Marshall Cavendish/Sandra Lousada


5. *A modern arrangement of patches*

Jerry Tubby

☐ When you have lined up the two rows of patches, use the inside line of the window template to check that the spacing of patches is accurate. The visible part of each Clamshell patch should correspond in shape to the inner line of the template.

☐ Pin the second row of patches to the first row and tack the two rows together, following the line of the convex curves.

☐ The final joining is worked by hemming round the convex edges of the patches in slip-stitch so that the stitching is on the right side of the work. Use a fine needle, and choose thread to blend in with the colour of the patches so that the stitching is as inconspicuous as possible. The stitches should be tiny, close together, neat and regular, and should follow the semi-circles of each patch to where the next patch is joined. Irregular or uneven hem stitching can mar the entire work, so it is well worth taking time over this.

☐ If the patches were originally hemmed using card patterns, remove all tacking stitches before placing the next row of patches in position. If the patches have been lined, remember that the tacking stitches are left in and should not show on the surface of the work.

☐ Continue adding a row of patches at a time until the fabric reaches the required length.

Finishing

The completed work should be lined in the usual way (see Patchwork chapter 2, page 182).

Before this can be done, however, the outside edges must be straightened. A simple way of doing this is to turn under the unwanted half patches to the wrong side.

A less wasteful method is to cut off the tops of the patches in the first row and to use these half patches to fill the spaces in the last row. The sides can be treated in a similar way—cutting off a half patch at the end of every other row and filling the relevant spaces on the other side.

A modern variation

There is a recent method of joining Clamshell patches which requires that the shapes be inlaid as in mosaic patchwork. It is a taxing design, especially for a beginner.

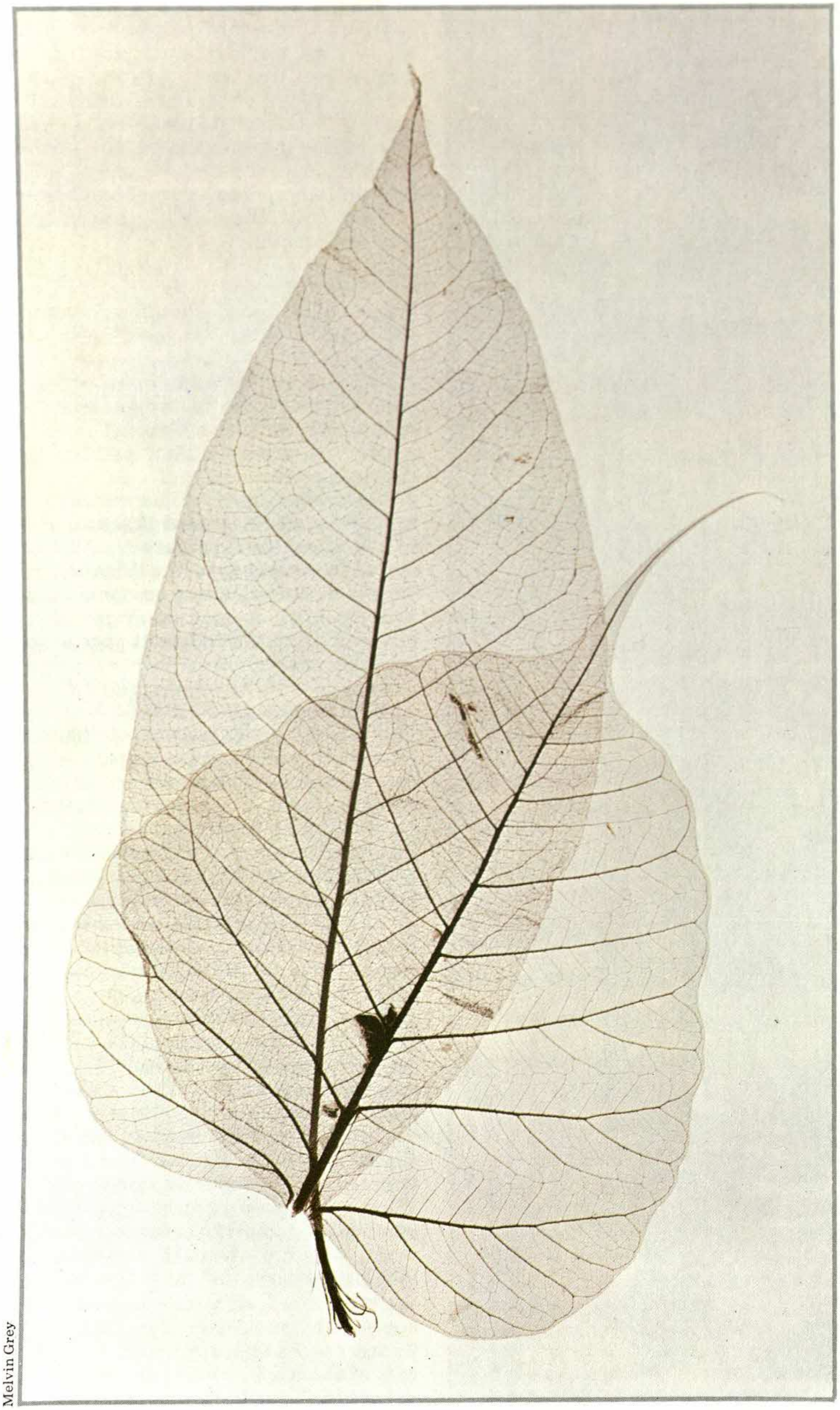
The patches are prepared initially in a slightly different way, in that they are hemmed all the way round. Accuracy in cutting the patches, and card or lining patterns, is essential in this type of inset work—the use of curved embroidery scissors is advisable.

Card or lining patterns are pinned to the centre of the patch and the convex edges hemmed as before. The two concave edges are also hemmed, clipping them in a few places to ease the fabric round the curves. The stem should narrow to a point. The hem is then tacked all round the shape.

When you have prepared sufficient patches to complete a section of the work, they are arranged in an interlocking pattern—as in a jigsaw—as shown in fig.5. Concave and convex edges are inset, and the edges are joined by slip-stitching on the wrong side of the work, so that the stitching is not visible on the right side.

Skeleton or shadow leaves

Flowers and plants 14



Melvin Grey

Though ethereal and fragile in appearance, skeleton leaves can be kept and used for years if they are stored carefully and handled very gently.

Skeleton leaves make an interesting addition to any dried or fresh flower arrangement. Sometimes they are known as shadow leaves, which gives a better idea of their delicate ethereal form. The skeletons can be used in their natural colour or bleached or dyed.

Though very fragile, skeleton leaves if handled gently, can be induced to curve and bend in most unusual fashions simply by winding them around a pencil.

The process of making skeleton leaves is long, smelly and rather tedious. It is worth while, however, as the finished product not only looks most attractive but also, if looked after carefully, will keep for years.

Leaves to use

Tough textured leaves are the best to skeletonize. Magnolia is the most commonly used but laurel, camellia, oak, maple, lime, holly and pear are all worth experimenting with. Leaves which have fallen or have turned colour are better than green leaves because their skeletons are mature.

Holly and a few other evergreens fall in a thick mat below their trees; those which are faded in colour, skeletonize quite quickly. Reject all those with brown, tough blotches on the skin. Make sure the leaves have stems of at least 2.5cm (1″) when collecting them.

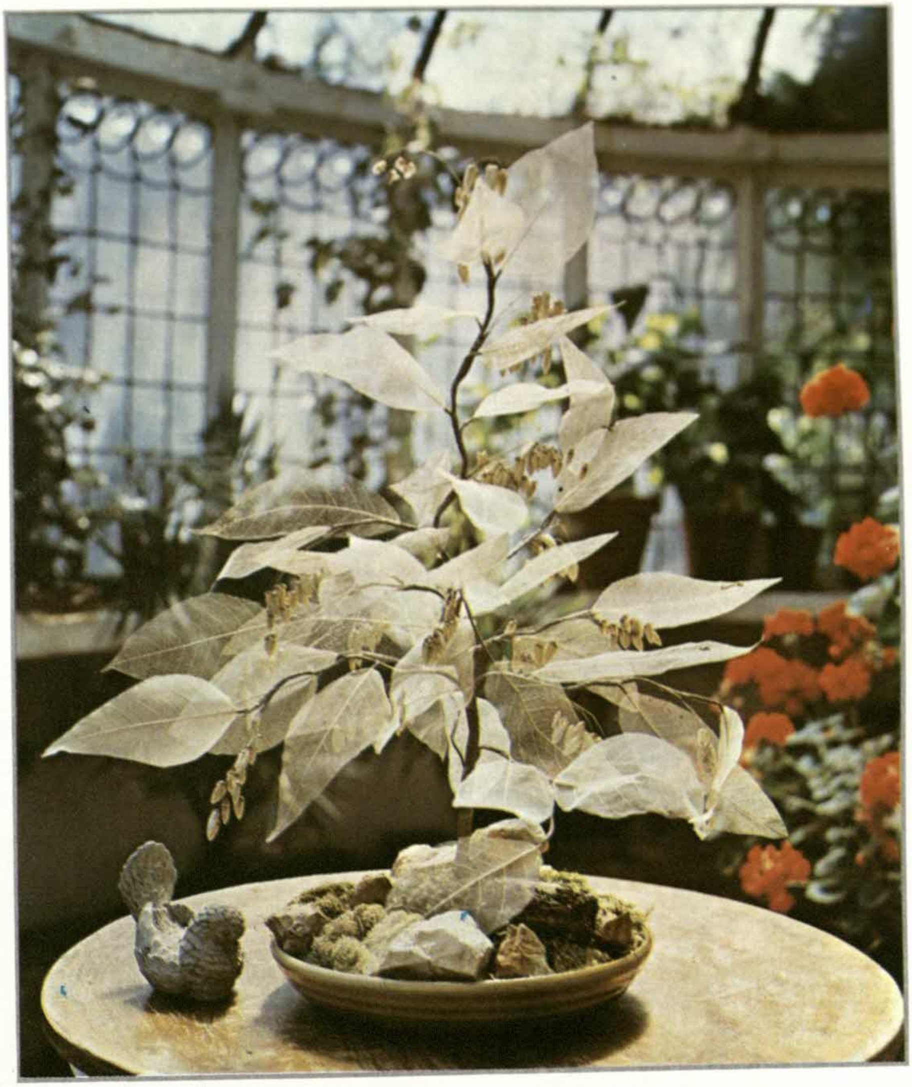
The natural method

Most tough-textured leaves can be skeletonized by natural methods. As failure rate is quite high it is wise to collect at least double the required number of leaves. Decomposing leaves are very smelly; if possible work in an outhouse or garage not in the kitchen.

You will need:

A quantity of leaves.
4.5 litre (1 gallon) bucket.
Cold water (rainwater if possible).
Eyebrow tweezers.
Towel.
Darning needle.
Blotting paper.
Florist's wire.

☐ Place the leaves in the bucket as soon as possible after they are collected. Completely immerse them in water. Leave the bucket for several weeks, topping up the water level when required. The water should not be changed when it becomes slimy and smelly as this is the indication that there is bacterial activity in the water—the greater the activity, the quicker the soft tissues of the leaves will disintegrate. The fleshy upper and



This unusual skeleton leaf decoration of leaves wired to a branch was designed by Pulbrook and Gould.

Steve Bicknell

undersides will rot and the tough central portion will remain.

☐ Inspect the leaves from time to time after the first four weeks. When the green part seems to have rotted away and the lacy veins are visible, very carefully remove a leaf from the water for testing.

☐ Hold the leaf by the stem with the eyebrow tweezers.

☐ Carefully hold it beneath a slow-running cold tap. At the same time, with a finger and thumb, gently rub away the slimy green flesh of the leaf.

☐ Alternatively, the pointed end of a darning needle can be inserted near the middle rib at the stem end. If the leaf is ready you should be able to lift the layers and peel them away from the skeleton. The leaf should then be washed very gently under a tap until all the green tissue is gone.

☐ When just the clean skeleton remains, it should be dried.

☐ Lay it flat on a towel then place it between two sheets of blotting paper. Press the leaves between the blotting paper very gently by laying a light book on top.

☐ Each dried skeleton leaf can then be wired using florist's wire (Flowers and plants chapter 3, page 524).

The quicker method

Should you need to skeletonize leaves in a hurry there is a quicker method you can use. It is only suitable for really tough leathery leaves such as magnolia, fatsia, thick maple or holly.

You will need:

A quantity of tough leathery leaves.

A gas ring or hot plate.

A large old saucepan (the process will damage a good one).

Washing soda.

Cold water (preferably rainwater).

Newspaper.

A kitchen knife.

Eyebrow tweezers, a towel and blotting paper.

☐ Make a strong solution of soda and rainwater—113gm (4oz) washing soda to 1 litre (2 pints) water.

☐ Place the leaves in the solution and boil them until they are pulpy.

☐ Using the tweezers lay them, one by one, on a newspaper—let the others remain in the pan, soaking not boiling, while you are doing this.

☐ Gently scrape off the pulp from the skeleton with the back of a knife.

☐ Thoroughly and very gently rinse the skeleton in cold water.

☐ Dry the leaves on a towel first and then between sheets of blotting paper, lightly pressing them at the same time.

Bracts and seed heads

Using the natural method several seed heads and bracts can be skeletonized. Bracts are leaflike and often brightly coloured organs which grow just below the flower cluster—the 'red' flowers of the poinsettia are, in fact, bracts, the real flowers are small and insignificant. Hydrangeas are probably the most successful but it is worth experimenting with anything you find in the garden that looks tough and veined.

The best time to skeletonize this material is after the texture has changed at the end of blooming and it has become tough and leathery. Leave the material on the plant as long as possible at the end of the flowering season. Preferably it should be allowed to have a touch of frost as this is a catalyst to disintegration. Should you live in a frost-free area the material can be wrapped in a plastic bag and placed in a deep freeze for a day or two.

Natural skeletons

Sometimes natural skeletons of leaves, bracts or seed heads can be found. Often these natural skeletons are damaged and soiled. However, once you have discovered their whereabouts, it is simple to gather them earlier in the season the following year, before they have become damaged, and prepare better samples. Wash them gently in rainwater if possible and, if necessary, bleach them.

Bleaching

If the skeleton leaves are discoloured or if you prefer them to be a neutral colour, the skeletons can be bleached. Soak them in water to which domestic bleach has been added—1 litre (2 pints) water to 1 tablespoon bleach. When they have reached the required colour remove them using the tweezers and rinse them under a gently running tap. Dry them on a towel and then lightly press them between two sheets of blotting paper.

Dyeing

Skeleton leaves are best dyed with ordinary ink.

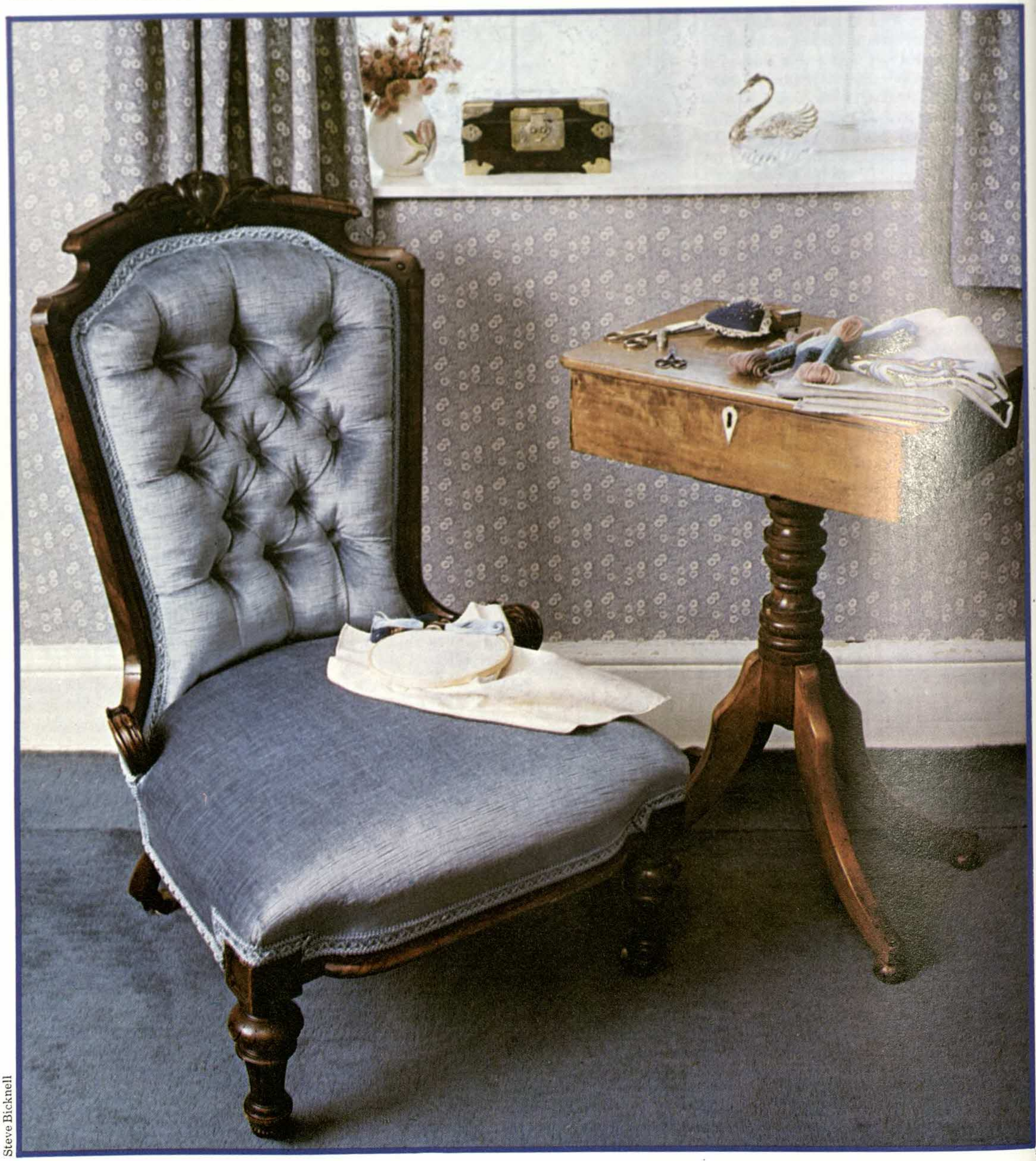
Place the prepared skeleton in a saucer of ink for a few minutes then allow it to dry on a sheet of newspaper.

Forming a roll edge

Cloth — upholstery 14

The basic techniques of traditional upholstery as described for a dining chair (Upholstery chapters 3 and 4, pages 468 and 486 respectively) are also

Elegant early-Victorian boudoir chair is restored with completely new upholstery. Upholstery chapter 13 (page 2442) describes the buttoning of the back and this chapter shows the processes involved on the seat.



Steve Bicknell

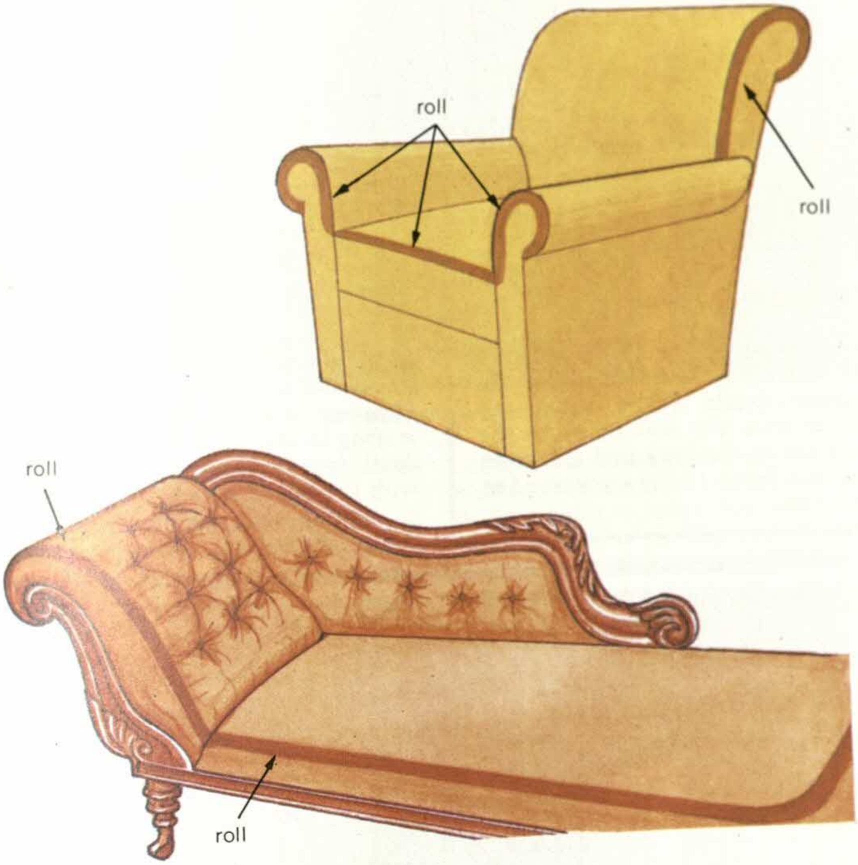
used for larger pieces of furniture such as easy chairs and sofas.

In most cases the construction of traditional upholstery is the same: webbing which spans the frame and supports the upholstery; springs (on larger pieces of furniture); hessian which acts as a foundation for the stuffing. The method of application of all these materials is quite easy to adapt to suit your own piece of furniture.

The next stage of upholstery, however, may cause difficulties. It is the formation and stitching of the stuffing into the roll edge. This is an essential process of nearly all traditional upholstery and it is also a process which requires practice.

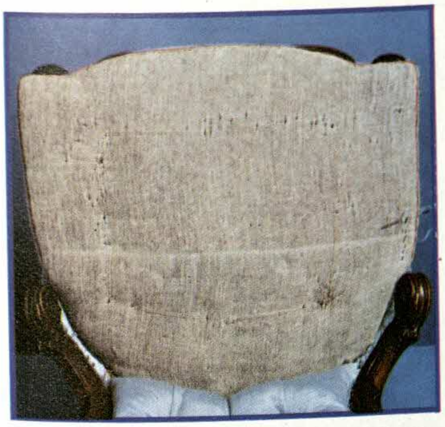
Roll edges

These are made wherever the upholstery is 'over-stuffed'. This does not mean where there is too much stuffing but where the stuffing is built up on the frame so that the sides of the stuffing are at right angles to the frame rather than sloping away from it. Roll edges are made around seats of dining chairs, chaise-longues and easy chairs, around the fronts of arms and around some backs of larger easy chairs (fig.1). All these are positions of heavy wear on the upholstery. If the roll was not there the top edge of the stuffing would not hold its shape, the surface would become lumpy and uncomfortable as the edge stuffing was pressed back, and the cover fabric would wrinkle and crease.

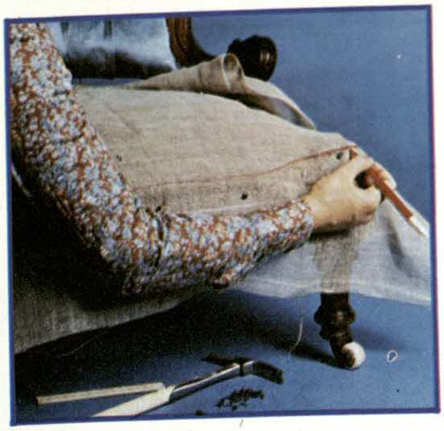


Paul Williams

1. *Some of the places where roll edges are made to give firmness and shape.*



2. *Sight line drawn on edge of seat.*



3. *Drawing round edge of frame.*

Ray Duns

When making a roll edge by traditional upholstery methods, the stuffing is applied in two layers. The first layer is the main layer, using two or three times as much stuffing as the second layer. It is the first layer which is covered with scrim and moulded and stitched into the roll edge. The second layer is a 'topping up' over the scrim and helps form the final dome shape of the padding. (Types of stuffing are described in Upholstery chapter 3, page 468.)

In modern upholstery the roll edge has been substituted by foam rubber or by a manufactured roll of stuffing which is tacked to the edge of the frame—but neither of these gives as much wear as the traditional stitched roll.

Forming the roll

If you have already tried to make a roll edge, you probably discovered that it was not difficult to make it firm, but that it took much more skill to form the stuffing into an even depth and into a shape which followed the line of the frame.

An essential factor in achieving these qualities is the sight line.

Sight line. This is an imaginary line which lies along the edge of the stuffing where the horizontal surface becomes vertical. If these two surfaces met at right-angles, for example, the sight line would be the angle. On a curved surface the sight line lies in the centre of the curve.

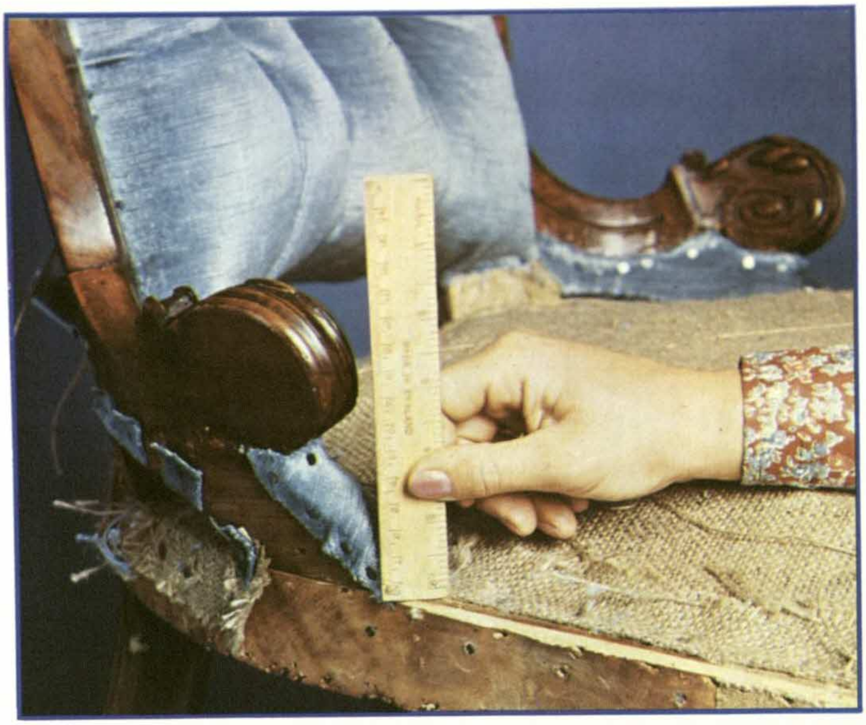
The sight line must be the same distance from the frame all along and it should also be immediately above the line of the frame. If you were to stand above a chair looking down at a seat, the outside edge of the seat would fall on the sight line and this edge should also follow the line of the frame (fig.2). It may help you to find the sight line if you draw a guideline on the scrim before you start to add the stuffing.

☐ To do this, lay the scrim over the hessian on the appropriate surface, matching the centre points of each side to those on the hessian and temporary-tacking to hold it in place on the frame.

☐ Using a felt-tipped pen, draw round the edge of the frame on the scrim (fig.3).

☐ Remove the scrim from the frame and draw a second line outside the first, leaving a margin equal to the desired depth of stuffing plus about 1.5cm ($\frac{1}{2}''$) for ease.

☐ Leave another margin of at least 2.5cm (1″) outside the second line for turnings and trim off the excess scrim.



Measuring to check required height of stuffing.

The stuffing depth

Always make a note of the original stuffing depth before you strip off the old upholstery. Then, because the stuffing will probably have become compressed, cross-check the depth against any guiding features the frame may have. On the chair in the photographs, for example, the stuffing depth should equal the height from the seat frame to the tack bar at the back and also from the seat frame to the show-wood at the sides.

Applying the stuffing

It is essential to take time and care over applying the first layer of stuffing and attaching the scrim because if this stage is well done the stitching of the roll will be easy.

☐ Attach the webbing, springs (if any) and hessian canvas (see Upholstery chapter 3, page 468). Work the bridle ties into the hessian.

Chamfered edge. The scrim covering the first layer of stuffing is always tacked to a chamfered edge—a narrow angled surface between the top and side faces of the frame. This is because the tacks have to be put near the edge and if they were not placed into the chamfered edge they might split the wood.

☐ After stripping the old upholstery check that the chamfered edge is strong enough to support more tacks. If there are many holes, fill with Plastic Wood and sand smooth when dry.

☐ If your chair does not have a chamfer, you can make one with a file. The edge should be at 45° to the top and sides of the frame and equal in width to an improved tack head. If your frame has horns—a small raised section of wood at the front corners—make the chamfer round these too (fig.4).

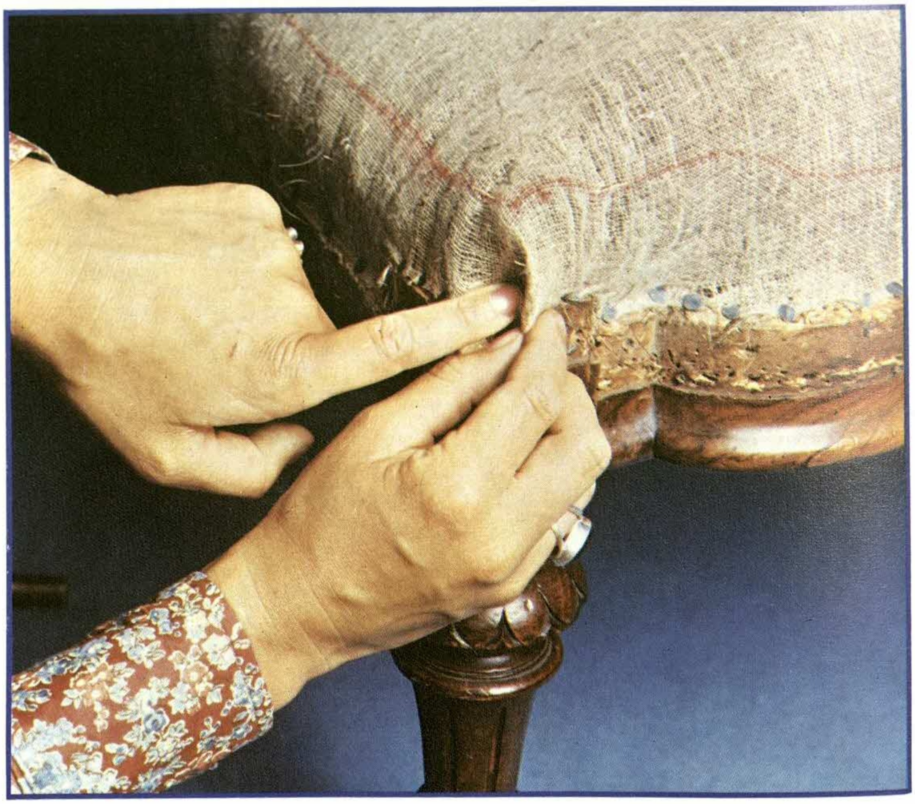
Shaping the stuffing. Insert the stuffing in the bridle ties to the desired depth (see box), compressing it lightly with the flat of your hand to gauge it.

☐ Add the scrim, making sure that the centre marks are correctly aligned.

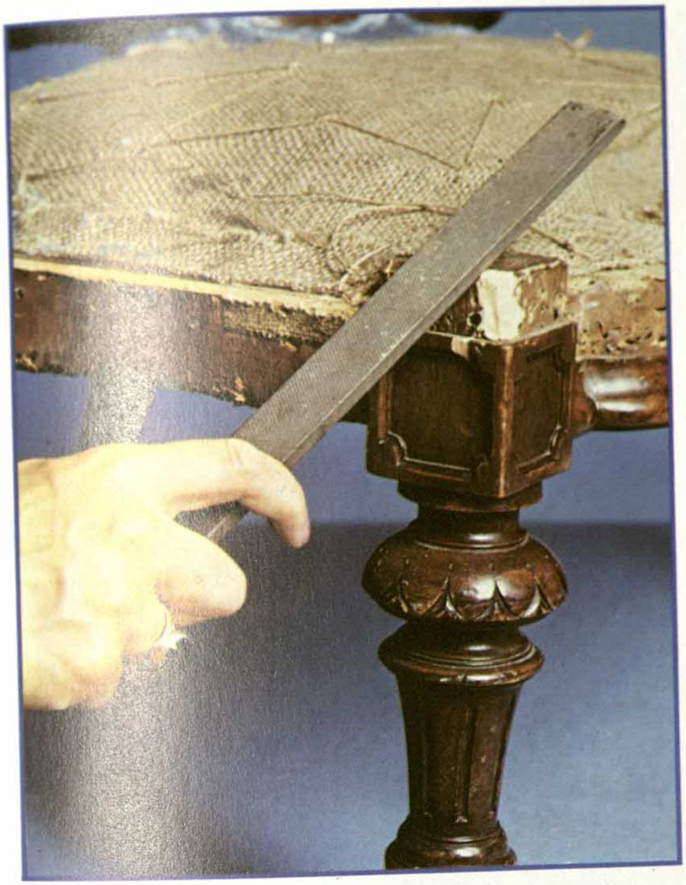
Corners. Pay particular attention to corners. For square corners at the front of a frame, pack in plenty of stuffing and fold the scrim into a square pleat (fig.6). At uprights fold the scrim back diagonally and cut into the edge just up to the fold. Pull the scrim down over the stuffing on each side of the upright and tuck in the pointed corner between the stuffing and the upright. Fold down the remainder in a neat square pleat. Check that the stuffing on each side of the upright is firm and not sloping away from the edge.

Tacking down. When you are satisfied with the shape of the roll, tack the scrim to the chamfered edge. Make sure that the outer edges of the tack heads do not protrude over the edge of the chamfer or they will spoil the line of the final cover.

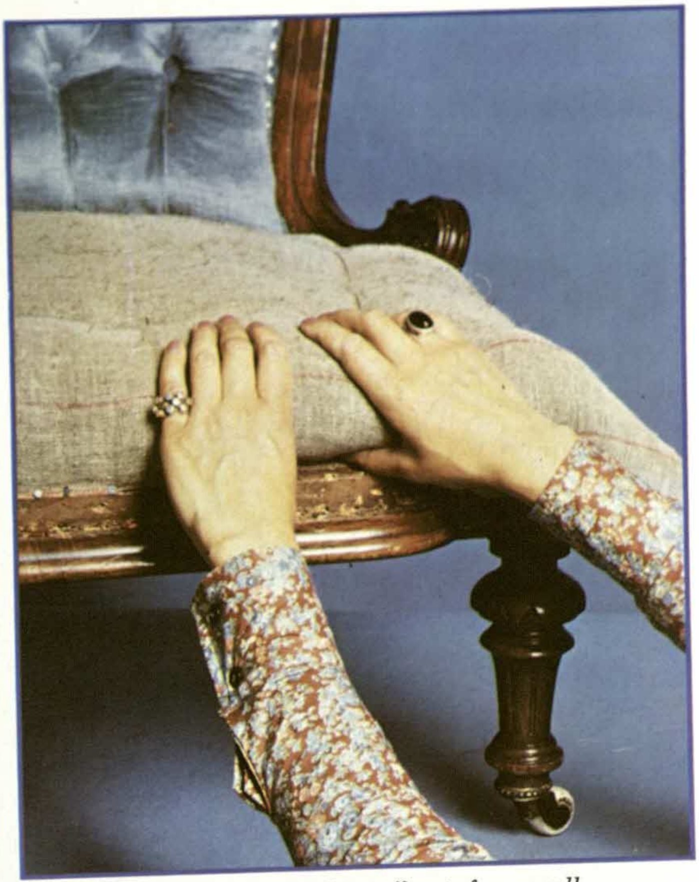
Check that the line of the roll follows the frame exactly by tilting up the frame and looking at it from below. Adjust if necessary.



6. *Folding scrim into a square pleat at front corners. Notice tack heads placed well within chamfered edge.*



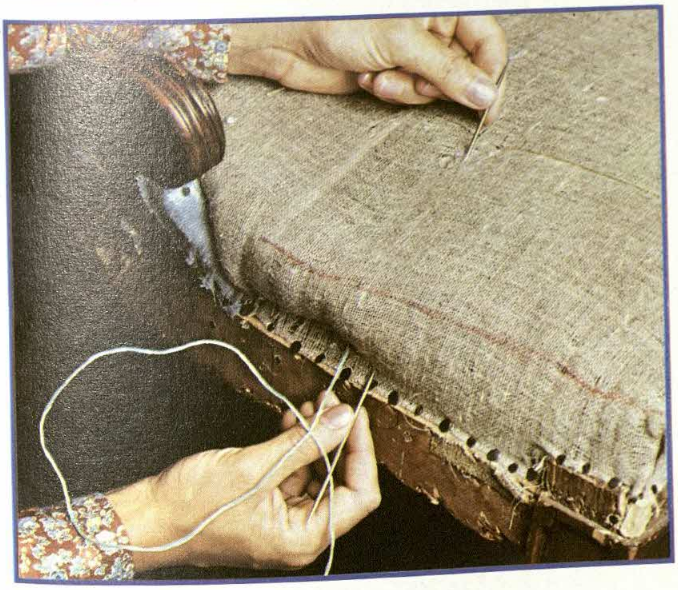
4. *Making chamfer round the horns at the front corners.*



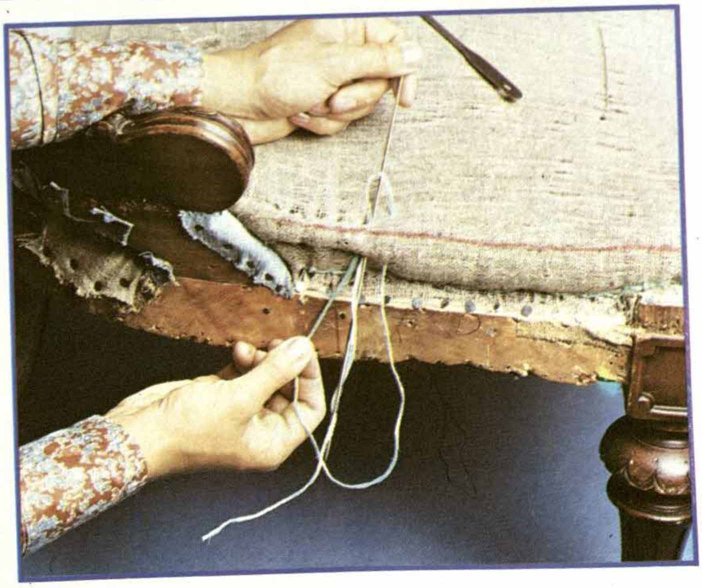
5. *Tucking the scrim under the stuffing to form a roll.*

Temporary-tack the scrim to the side face and work the panel stitching.

☐ Working on one side of the frame at a time, remove the temporary tacks, lift up the scrim and start moulding the stuffing into a roll of the desired size. It often helps to judge this by tucking under the roll of stuffing, smoothing it over and temporary-tacking the second marked line to the chamfered edge. The scrim should now be smooth but not tight (fig.5).



7. *Working the blind stitch to pull stuffing to edge.*



8. *Working the top stitch to form stuffing into roll.*

Ray Duns

Stitching

Blind stitching. Work this as described in Upholstery chapter 3 but, on curved frames, take stitches of half the size specified to prevent drag marks in the scrim (fig.7).

Top stitching. For each stitch it helps if you form the roll between the fingers and thumb of the left hand. You can then insert the needle level with your thumb and bring it out on top of the stuffing, level with your fingers. Again, take small stitches to prevent drag marks (fig.8).

The upholstery is now ready for the second layer of stuffing and the covering. Finish off with braid to cover raw edges.

Traditional Eastern kites

Paper 64

In Asia kite-flying is far from being a game for children. It is a serious national pastime for adults and the calendar is filled with festivals and tournaments, many of them with religious significance. Kites can take

the form of fabulous birds or beasts which are often imbued with evil spirits in order to float away the harm that may otherwise attack the owner's family. Others are used for fighting, their lines covered with glue and then dipped in powdered glass so as to sever an opponent's line. In Japan one village will often vie with another to make an enormous kite which takes several people to fly it, each controlling an individual guide-line.

Fish, birds and insects are characteristic subjects for Oriental kites. Most have a special symbolic or religious meaning but all have the ability to inspire wonder and the sheer joy of aerial spectacles which is the essence of kite flying.

Jerry Tubby

Carp

This fish shape, which is shown on the previous page, is the simplest of all the Japanese kite designs. On the boys' festival on May 5th a carp is flown for every male child in the household in the hope that the boy will emulate the character of this fish which swims upstream, overcoming all difficulties.

The kite is tubular, rather like a windsock, with a hole at each end. Make it any size that you like, provided that the hole at the mouth is larger than the one at the tail so that the wind will inflate the body.

You will need:

Two large sheets of tissue or other light-weight paper.
Poster paints or scraps of coloured paper.
Medium gauge wire.
Short length of thread or twine.
Pencil, scissors and glue.

☐ Draw the carp shape freehand on the paper and cut it out, cutting through two thicknesses at once.

☐ Glue the pieces together along the top and bottom edges. Fold the seam over and glue down.

☐ Paint the carp or, if you have used tissue, decorate it with paper shapes.

☐ Bend the wire into a loop to fit the carp's mouth and glue it in place, folding the edges of the paper over it.

☐ Tie the ends of the thread or twine to the wire at either side of the carp's mouth. The flying-line can be attached to this loop.

Although very decorative, this kite is not a good flyer and will only rise if there is a very strong updraught.

Butterfly

This is a popular design, perhaps because the fluttering of a kite tends to resemble a butterfly.

You will need:

3 pieces of bamboo garden cane about 60cm (24") long.
Sheet of strong paper, such as cartridge paper, about 60cm (24") square.
Sticky tape.
Curtain ring to act as towing-ring.
Twine or strong thread.
Scissors and craft knife.
Pencil.
Poster paints and brush.

☐ Fold the paper in half and draw a half butterfly shape on it so that the fold is along the butterfly's spine. Draw the largest shape possible and cut out.

☐ Open the paper out flat and paint it with any design you choose.

☐ While the paint is drying, split the cane lengthwise with the knife.

You will need firm, rigid pieces for the butterfly's spine and lower wing supports and thin, pliable pieces for the upper wing supports: 30cm (12") for the spine, two pieces 30cm (12") for the lower wings and two pieces 60cm (24") for the upper wings.

☐ Mark the position of the supports on the back of the butterfly, making sure that one side is the exact mirror image of the other for perfect balance. Follow fig.1.

Now enlist the help of a friend. One pair of hands is needed to hold each support in place while the other tapes it in position.

☐ Fix the supports in this order: spine, lower supports, lower half of upper supports.

☐ Fold the top edge of the paper over the remaining half of the upper supports and tape them (see fig.1).

☐ Tape two thin bamboo antennae to the top of the spine.

☐ With the right side of the kite facing you, make tiny holes in the kite and tie a piece of thread through them on to the frame at each of the three points marked **x** in fig.1.

☐ Tie each thread to the towing-ring so that the kite hangs at the correct angle (see Paper chapter 63, page 2438). This kite, which does not need a tail, will fly even better if it offers a convex surface to the wind.

☐ To curve the kite, tie a piece of thread to one upper wing tip, stretch it across behind the kite, and tie it to the opposite wing tip, pulling it so tight that the kite is bowed.

Butterfly variations

When you have made a simple butterfly you may like to go on to a more complex design.

Jerry Tubby

The dragonfly kite, a typical Eastern design, has a comic character which is exhibited both in its vivid colouring and its ridiculous expression.

You will need:
Materials as for the simple butterfly, this time using tissue paper for the cover and decorating it with torn tissue paper shapes.

The kites in figs.2 and 3 have rigid spines and pliable wing supports bowed into shape with thread.

Figs.4 and 5 show the design of the frames, heavy lines representing the canes and dotted lines the threads.

☐ Follow the procedure of notching the canes, binding them where they cross, and fitting the cover as described in Paper chapter 63.

When making the double butterfly (see fig.5), bow the four wing supports into arcs and bind the sticks where they cross.

☐ Add extra thread supports (shown in green) before removing the two longer bow strings (shown in red).

☐ Attach a single bridle (Paper chapter 63, page 2438) to the points marked **x**.

Bird

The body of this kite (page 2479) is built on a framework of bamboo slivers rather like the ribs of a rowing boat, and the head is a thin hollow shell of papier mâché.

You will need:
Bamboo cane.
Medium weight white paper, such as shelf paper.
Absorbent paper for papier mâché, such as newspaper.
Plasticine.
Flour and water paste.
Glue.
Water-colour paints.
Brush.
Thread or thin twine.
Knife and razor blade.

☐ Begin by splitting a number of pieces of cane to build the body.

☐ Construct a framework and bind the pieces where they overlap (fig.6a). Try to match the two halves perfectly with joins in exactly the same places.

☐ Following fig.6b construct the front of the body with a series of curved canes to form the ribs.

☐ Spread glue on the curved ribs.

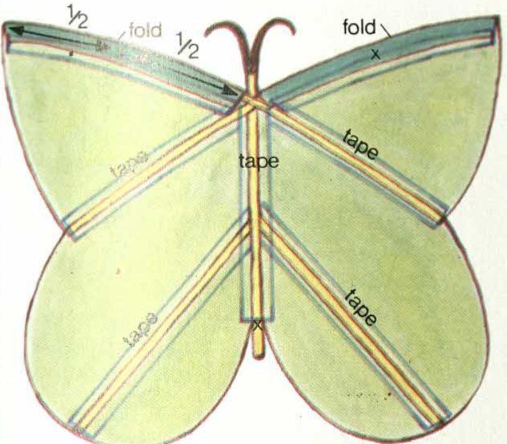
☐ Cover the sections of the ribbed framework with strips of paper.

☐ Use a razor blade to trim the paper where it overlaps to form a butt joint.

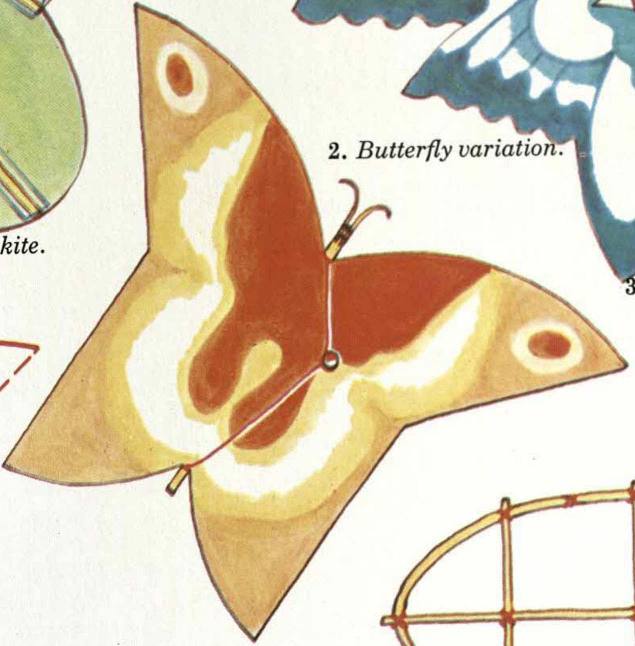
☐ Trim off surplus paper.

☐ Now shape the head in plasticine and cover it with a thin layer of papier mâché.

☐ When the head is dry, dig out the plasticine and glue the head to the body.

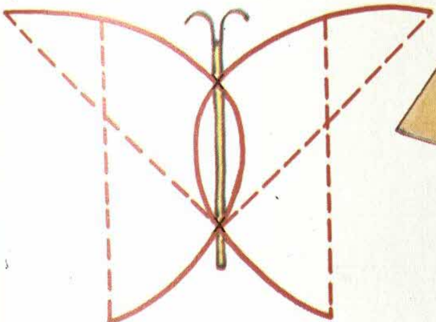


1. *Positioning of struts on butterfly kite.*

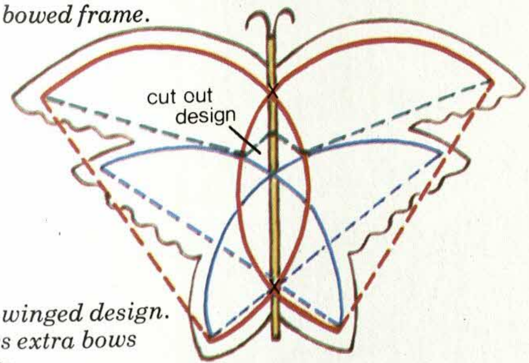


2. *Butterfly variation.*

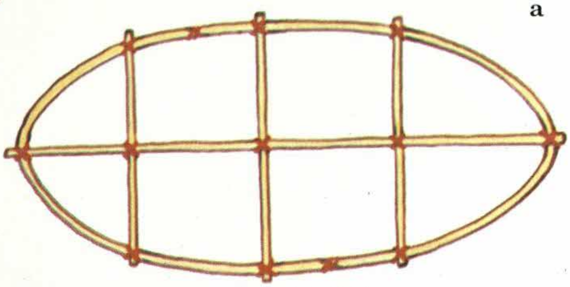
3. *Double winged butterfly.*



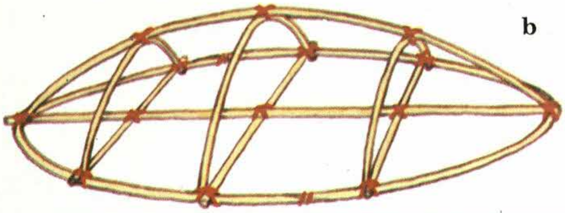
4. *Making a bowed frame.*



5. *Double-winged design. Blue shows extra bows and strings.*



6a, b. *Framework for a bird kite.*



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☐ Make two separate wings and join them together (fig.7).

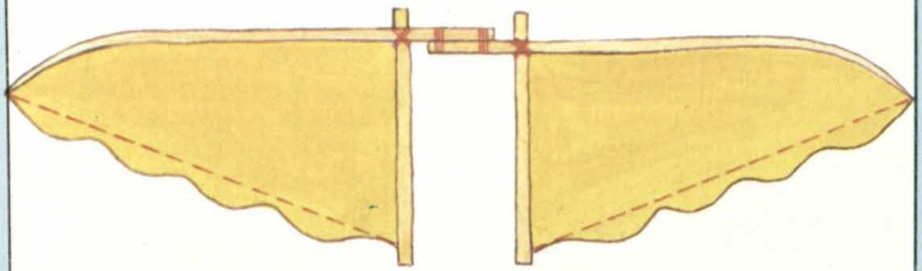
The wings have bamboo along two sides and a thread (dotted line) to bow the tops of shape. These threads may be removed later if wished.

☐ Bind and glue the finished wings on to the back of the body.

☐ Cut out a tail shape in paper and reinforce the top by gluing on a piece of thin card.

☐ Attach the tail to the bird with loops of thread.

☐ Tie a single bridle to the body framework at the neck and three-quarters of the way down its body.



7. *Bamboo struts for bird kite wings. Dotted lines show position of strings.*

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Dragonfly

Make this as for the bird, but build up the tail sections on flat bamboo frameworks. Tie the sections loosely together with thread.

Giant kite

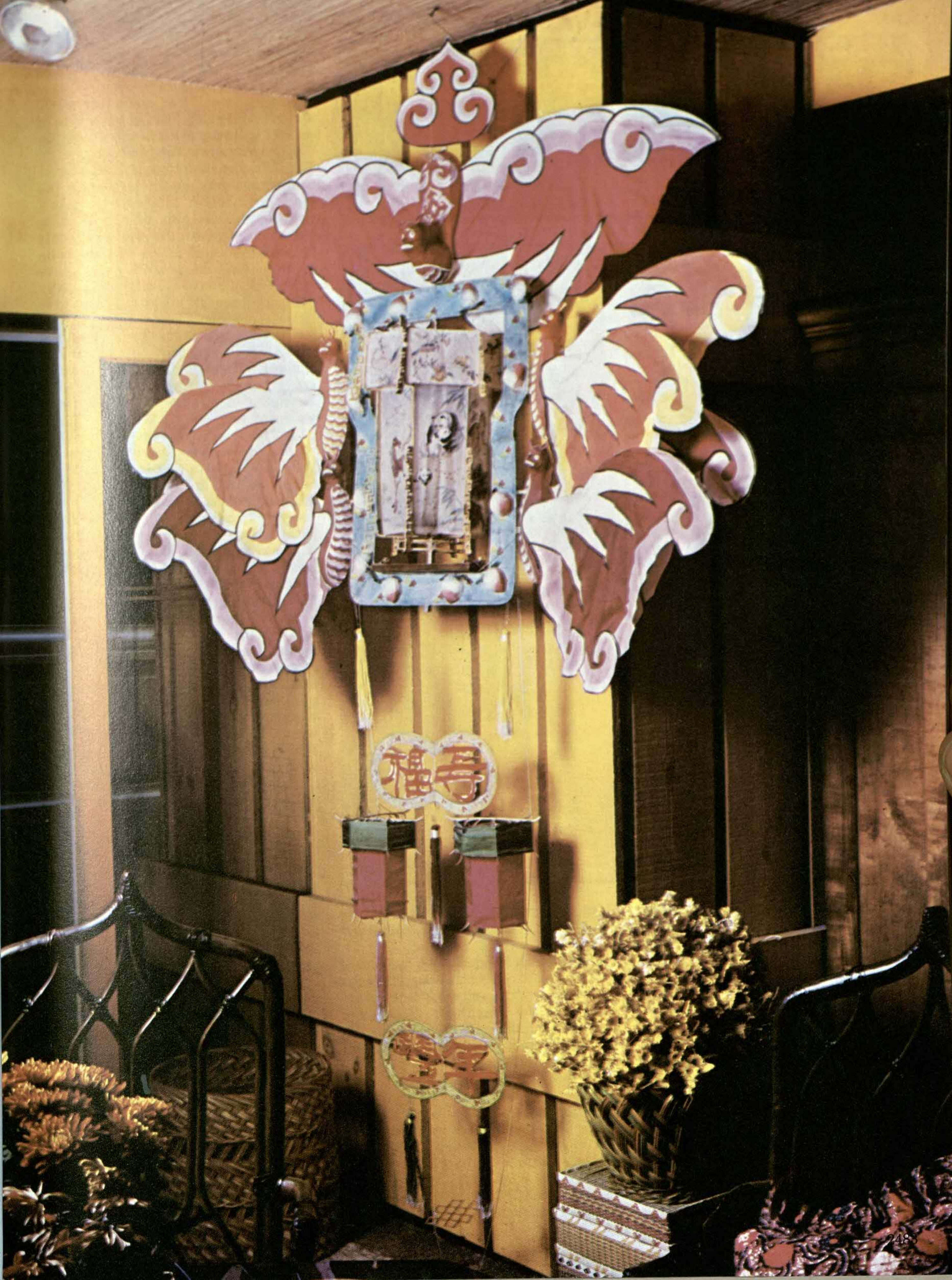
There is no limit to the size and complexity of the kites you can make. The giant kite illustrated is built up on a rectangle of thin plywood with a decorative lantern set in the middle. The fabulous birds and beasts perched round the frame are all made on the same principle as the bird already described and you can let your imagination run riot on the tassels, lanterns and slogans that act as the tail.

Remember that the two sides of the kite must balance each other exactly in weight and shape.

Right: a fanciful, fabulous kite composed of bird-like demons round a lantern.

Below: the decorative potential of Oriental kites makes them as popular for wall hangings as for flying.

Camera Press


福寿
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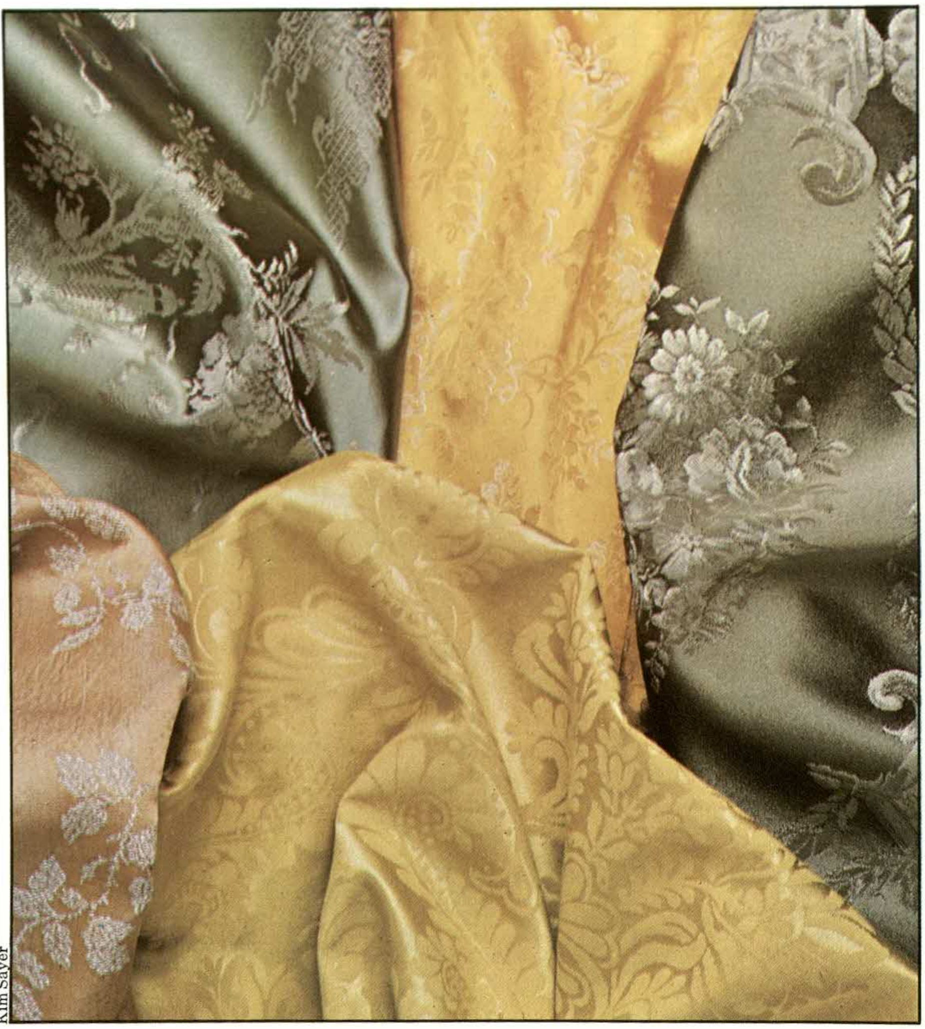
Satins, sateens and damasks



Kim Sayer

Modern machine-made damasks are popular for upholstery and curtaining.

Satin weaves are an extension of twill weaves (see Weaving chapter 28, page 2376) and are more loosely woven than weaves based on plain weave as there are fewer interlacings. The surface of the cloth is made up either of warp floats (satin) or weft floats (sateen). Float is the term given to a thread which goes over more than one thread before interlacing and therefore 'floats' on the surface for a little way. A cloth which is satin on the surface will be sateen on the reverse side and vice versa.

One of the main advantages of satin weave, the general term, is that the surface is very smooth and unbroken. Because there are fewer interchanges than with other weaves, the cloth has a very smooth finish. It also has one of the strongest concentrations of colour in both the warp and weft as a consequence of the long floats. Because of this it is an ideal weave for showing off especially good yarns such as handspun, slub or knop yarns.

Satin weaves can produce a great range of cloths suitable for a variety of uses in both dress and furnishing fabrics. Using either worsted or woollen yarns, the closer set of these weaves will produce heavier cloths which are very suitable for curtaining or coating. On the other hand, the weave will produce fine cottons or silks for soft dress or shirting fabrics with a high sheen. Originally, the term satin applied only to silk fabrics woven in this particular way, but since the early sixteenth century the word has been used to describe the method of weaving itself regardless of the yarn used.

The loose construction of these weaves means that they require more ends and picks per 2.5cm (1″) in order to make a firm cloth. The sett of the cloth is extremely important as a badly balanced piece of fabric will not hang or drape well. In general, satin weave will need to have up to twice as many ends per 2.5cm (1″) than a plain weave in the same yarn.

It is especially important when weaving a cloth with areas of both satin and sateen on the surface to have a square set or balanced cloth so that the same strength of colour appears in both warp and weft.

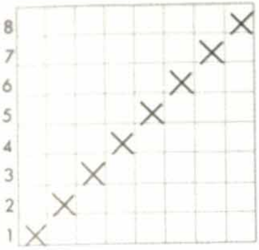
Mock satin. This weave is, in fact, more like a slightly altered twill rather than a pure satin and is thus called a 'mock satin'. In order to create a smooth surface, the weave must not be completely regular. Consequently, a satin weave tends to use more shafts than a regular twill. The simplest satin weave effect can be created on four shafts.

For all satin weaves the threading up remains the same (fig.1)—a regular draft whether you have a four-shaft or sixteen-shaft loom. Because all satin weaves are constructed on a straight draft, 1, 2, 3, 4 etc, lifting plans are not necessary for they simply repeat the weave diagram. Consequently, the weave diagram not only shows you the structure of the cloth but also how to weave it. Every time a square is filled in, that particular shaft is lifted.

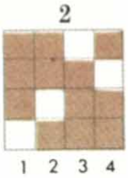
The only real difference between the 'mock satin' (fig.2) and the 3/1 twill (fig.3) is that the third and fourth picks have been reversed. This is the only satin weave that can be woven on four shafts. For all the other weaves in this chapter a loom with eight or more shafts is needed. The 'mock satin' can be combined with a sateen based on the same construction (fig.4) if you have an eight-shaft loom.

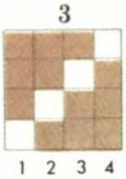
Damasks. The combination of satin with sateen in a mixture of warp and weft floats on each surface of the fabric is also known as damask.

One of the most important points to check when combining satin and sateen weaves or these with other weaves is that no long floats cross from the satin to the sateen areas in either the warp or weft. These long floats destroy the clarity of the block design and catch or pull more easily. The best way to avoid this and to ensure a good construction line on a satin/sateen change is to mirror the weave

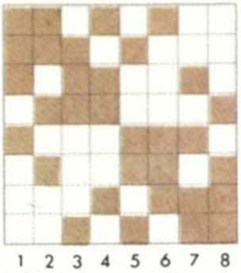


1. *Draft for satin weaves.*

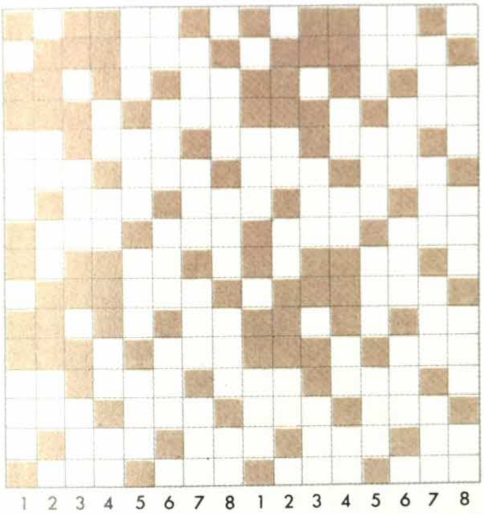




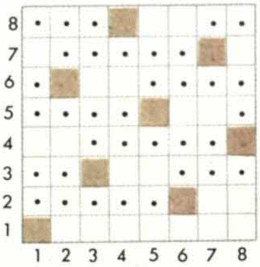
2. *Mock satin weave plan.*
3. *3/1 twill weave plan.*



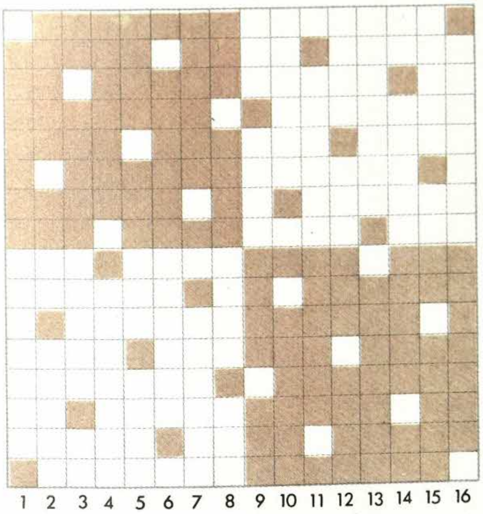
4. *'Mock sateen' satin.*



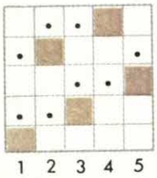
5. *Small area of satin surrounded by sateen.*



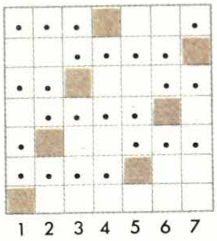
6. *Popular eight-end sateen.*



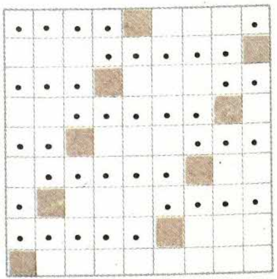
7. *Damask weave using eight-end satin/sateen.*



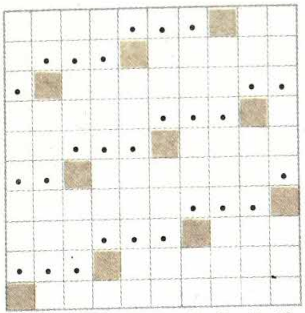
8. *Sateen on five ends.*



9. *Sateen on seven ends.*



10. *Regular sateen on nine ends.*



11. *Regular sateen on ten ends.*

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completely. Where a lift appears in the satin weave there should be a space in the sateen. This works perfectly with damask weaves as in fig.4 which change in blocks.

In other weaves which may have an area of satin surrounded on all sides by sateen (fig.5) this mirror effect will only work either horizontally or vertically but not both.

Designing

Regular satins can be constructed mathematically and the rules also apply to all regular sateens. These may be based on any number of shafts which can be divided into two unequal parts not counting the number one as a number. The two parts must not be divisible by each other nor divisible by a common number. Therefore, for a satin based on eight ends and picks, on eight shafts, the numbers found are three and five.

These numbers dictate the number of ends between the shaft lifted in one pick and the next. The dotted squares in the diagrams indicate this. The eight-end satin or sateen (fig.6) is a common satin weave, and is certainly the most popular with weavers. It can be used in a satin/sateen weave in blocks completely mirrored (fig.7) on a sixteen-shaft loom.

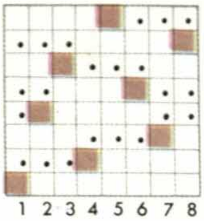
Other regular sateens are based on five ends (fig.8), seven ends (fig.9), nine ends (fig.10) and ten ends (fig.11). For clarity, all constructions are for sateens as there are less warp ends lifted.

Working out a weave plan. In order to work out a regular sateen take a piece of graph paper and make a square for the relevant number of ends. Using the eight-end sateen as an example (see fig.6) place a mark in the first square in the lower left-hand corner. On the second pick, starting where you have made your first mark, count to the right five squares and in the sixth make a second mark. On the third pick start counting again to the right from where you placed the mark on the second pick and when you run out of squares to the right finish counting on the left-hand side of the same row.

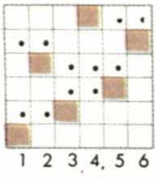
Continue this way until the eighth pick has been completed. You will find that you have placed a mark on each square where the warp and weft interlace and thus have constructed a regular sateen. Alternatively, you could construct an eight-end sateen using the number three.

Irregular satins

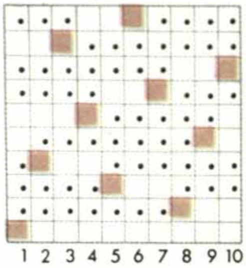
The construction of a regular satin will produce a very faint twill-like line which breaks up the smooth finish. Because of this, irregular satins which do not have this line have been



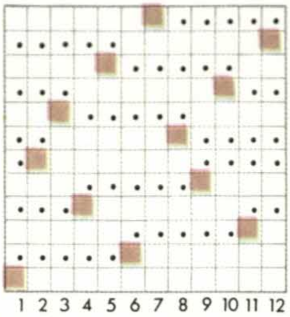
12. *Irregular sateen.*



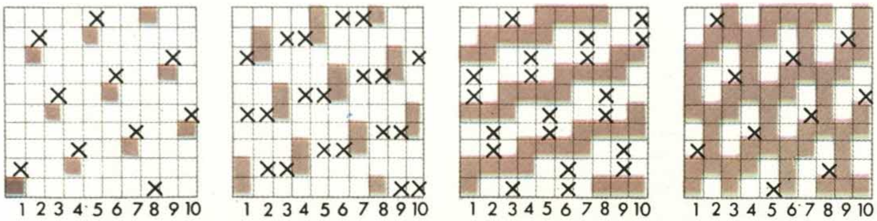
13. *Six-end irregular.*



14. *Irregular on ten ends.*



15. *Twelve-end irregular.*



16. *Progressive pattern-making based on a regular ten-end sateen weave.*

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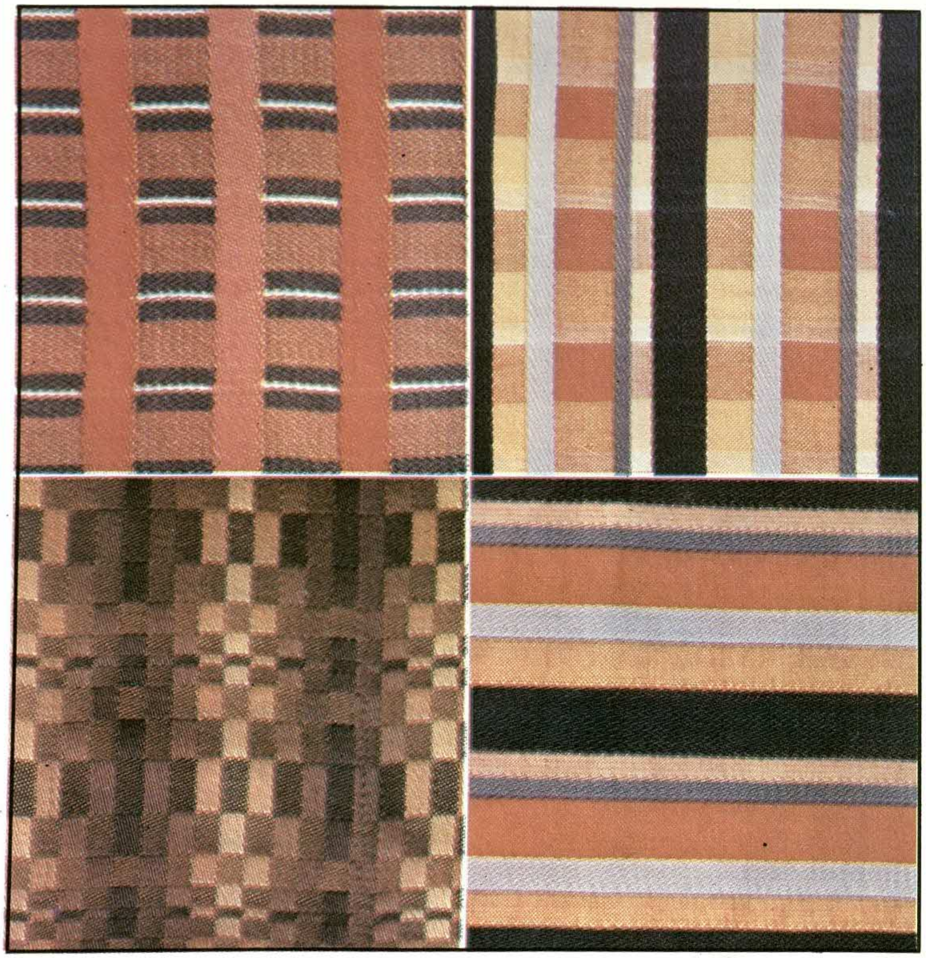


Satin/sateen (left) and satin/plain weave (right). Designed by Wendy Jones.

developed. These can also be constructed mathematically but are slightly more complex.

In the same way as with regular sateens, choose a number which is not divisible into the number of shafts which are used. On an eight-end sateen use either three or five and construct in the same way until the fourth pick or half way is reached (fig.12). On the next pick move to the left for half the number of picks in the repeat ie eight ends = four. Then continue in three again.

Irregular sateens or satins can be arranged on six ends (fig.13), ten ends (fig.14) and twelve ends (fig.15).

Variations. The basic satin weave construction can also be extended and used to create new patterns. The simplest method is by adding new marks on to the original basic weave diagram. These marks must all be added in exactly the same relation to those in the original weave so that the satin construction is not destroyed. Fig.16 shows a progression of patterns developing from a ten-end sateen weave. The crosses show the latest addition to the design at each stage.

The advantage of this form of pattern making is that it will use the same number of shafts as the original satin weave which formed the basis for the design. Care must be taken as to the sett of these cloths as the interchange of warp and weft ends will have changed from the satin or sateen weave. You will need a slightly looser sett than for the regular satin weave.

Stripes. Satin or sateen stripes can be combined very effectively with other weaves—especially plain weave which will give areas of sheer and solid fabric with the satin stripes being slightly raised because of the different weaves. The sett of these cloths which combine weaves is very important as a satin or sateen stripe will require more ends or picks per 2.5cm (1″) than will the plain weave.

These combination weaves can produce very exciting designs for shirting and curtaining. Vertical stripes can be woven on a loom with eight shafts; horizontal stripes on a loom with four shafts using 'mock satin'.

All the weaves described in this chapter are very versatile and there are hundreds of combinations with constructions and yarns open to the weaver who wishes to explore the possibilities of satin and sateen weaves. From the basic weaves covered in this chapter the weaver can build and design fabrics which are both interesting and highly individual.

Worsted lengths using satin and sateen stripes for density of colour and a smooth finish. Designer: Eva Pettigrew.

Different ideas for fun finishes

Colour — paint 37

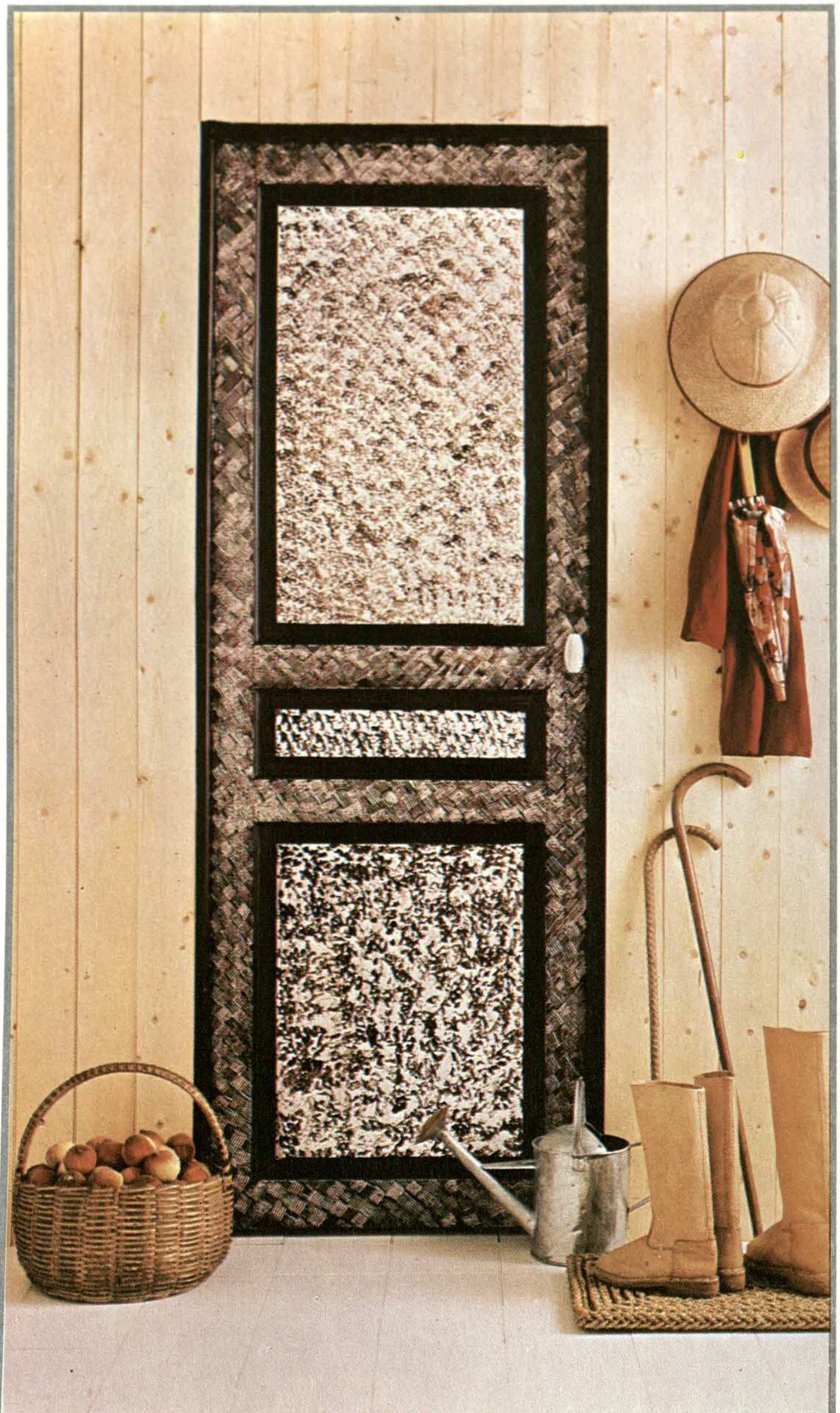
It is often necessary to find an economical but attractive method of home decoration. A fun finish could be the answer. Walls, floors, doors, furniture and furnishing accessories can all be decorated. All you need is paint of various colours and lots of imagination.

Earlier chapters describe a number of finishes which meticulously imitate wood, bamboo and several minerals (Paint chapters 30, 31, 32, 33, 34; pages 1980, 2006, 2034, 2062, 2114). Because of the detail involved these techniques are fairly long and arduous, but there are short-cut methods of producing painted finishes which are both fun and fanciful.

Almost anything that can be used to spread paint can be used to create a fun finish. A toothbrush, paintbrush, sponge, comb or dish-cloth all give different finishes to plain surfaces.

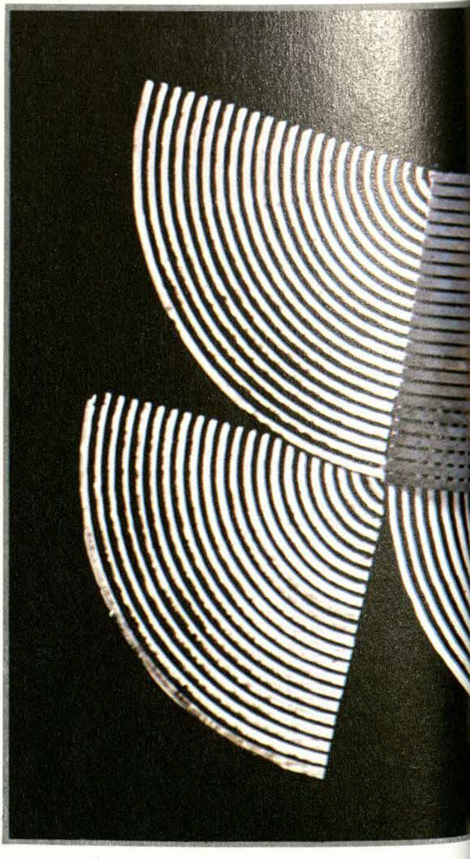
Preparation

Before attempting a fun finish it is best to experiment on a square piece of hardboard to achieve the required effect. Use this experimental hardboard square as you would a wallpaper sample to judge whether or not you like the design. When you are satisfied, prepare the surface you are going to decorate.



100 Idees de Marie Claire/Duffas

Left: a practical fun finish for a busy home, the mottled decoration well disguises dirty finger marks.



Floors. Wood floors of all kinds can be painted, but first the surface must be cleaned and any old wax removed. Old glossy finishes must be roughed up by sanding so that the new paint can adhere properly.

Furniture. Whether you are painting an unpainted chest or an old one with several layers of paint already on it, you must sand the surface with fine glasspaper and wipe it down with white spirit. Unpainted furniture should be given a coat of leadless white primer.

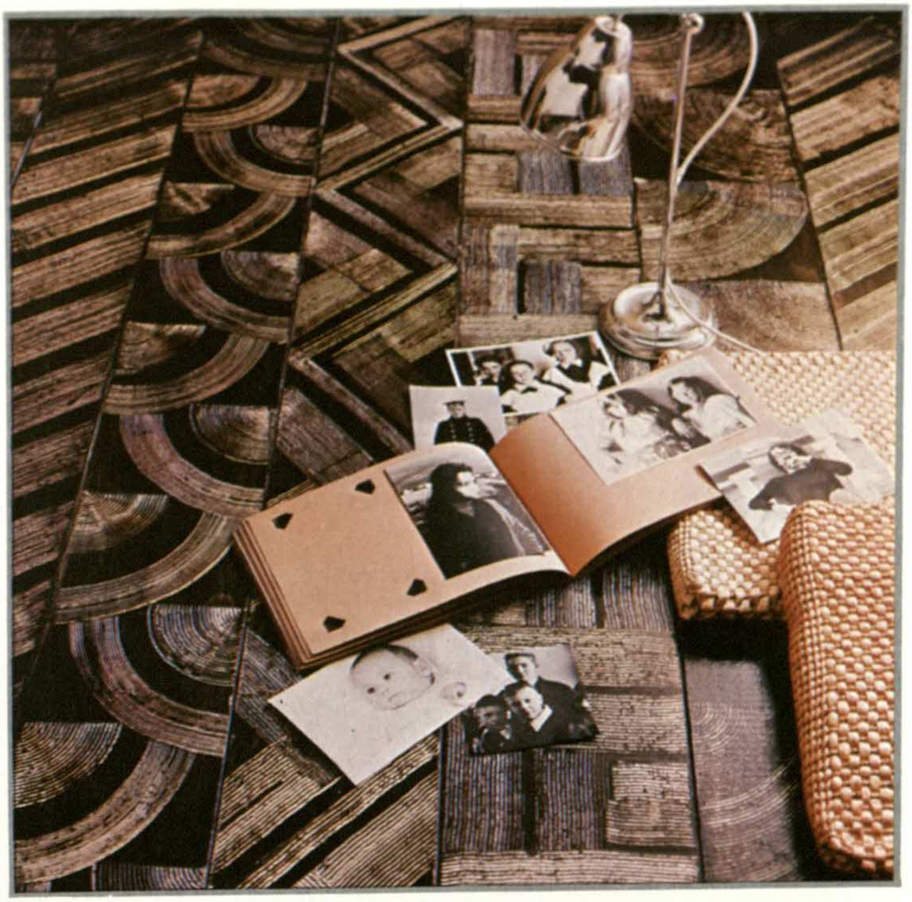
Walls. Make sure the surface is clean and in good order; flaking plaster and old paint must be scraped off and the wall re-primed.

Background

Once the surfaces are prepared a base coat should be applied—two if necessary—and allowed to dry. This will be the background to your fun finish. For wooden furniture and floors use enamel paint; for walls, chimney-pieces etc use a matt emulsion. The colour of this base coat should be appropriate for the background of the design.

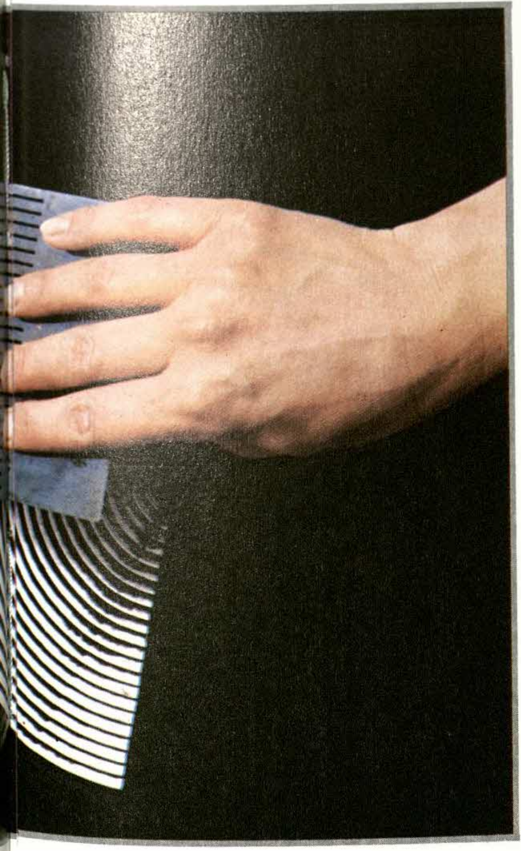
Finish

Acrylic paint is used for the finish. It can be applied on to almost any background. Acrylic paint can be



Above: the fun finish on this floor has been protected from hard and continuous wear with coats of varnish.

Drawing arcs through paint with a comb is a most effective and simple method of decorating a plain surface.



Below: all sorts of household items can be given fun finishes. This tray was decorated using a comb.

bought in a wide variety of colours, though it is simple to mix your own shades. This type of paint dries very quickly so only mix a small amount at a time. The paint is mixed with water, so it is easy to vary the consistency. Paint of different consistencies will obviously give different finishes.

As the paint dries very quickly only work on one small area at a time. Apply the finish over the area with whatever applicator you have decided is appropriate, either by wiping, rubbing or generally splodging it over the area.

Application

A few ideas for methods of application are listed here but there are many more, leaving lots of room for the decorator to experiment.

Combs of all shapes and sizes made of rubber, metal or plastic can be used to make a series of lines or a sweeping arc. The tray shown on page 2489 has been decorated using one comb, the floor using combs of different shapes.

Make the design, arc by arc, on a white enamel background using a black finish. Experiment with different colour combinations. Once the finish on the floor is dry coats of hard varnish are applied to protect the paint. This must be renewed from time to time to protect the finish beneath.

Toothbrushes of all shapes and sizes give a variety of splodgy stippled finishes which look like fanciful marble. The dressing-table was decorated on a white gloss background with a pink finish to which a little yellow had been added. Both a toothbrush and artist's paintbrush were used to produce the final finish.

Old dish-cloths can also be used to give a marble-like finish. This is useful for larger surfaces such as walls and doors. The cloth can be used to wipe or rub on the paint; both methods will give different finishes.

Sponges literally splodged on to the item being decorated give an interesting dappled finish. The panels of the door (page 2488) were decorated in this fashion. Old chimney-pieces can be renovated with this style of finish to give a marbled effect.

Old paintbrushes, both decorator's and artist's when rubbed or just pushed on to the surface give a blurred stippled finish to furniture.

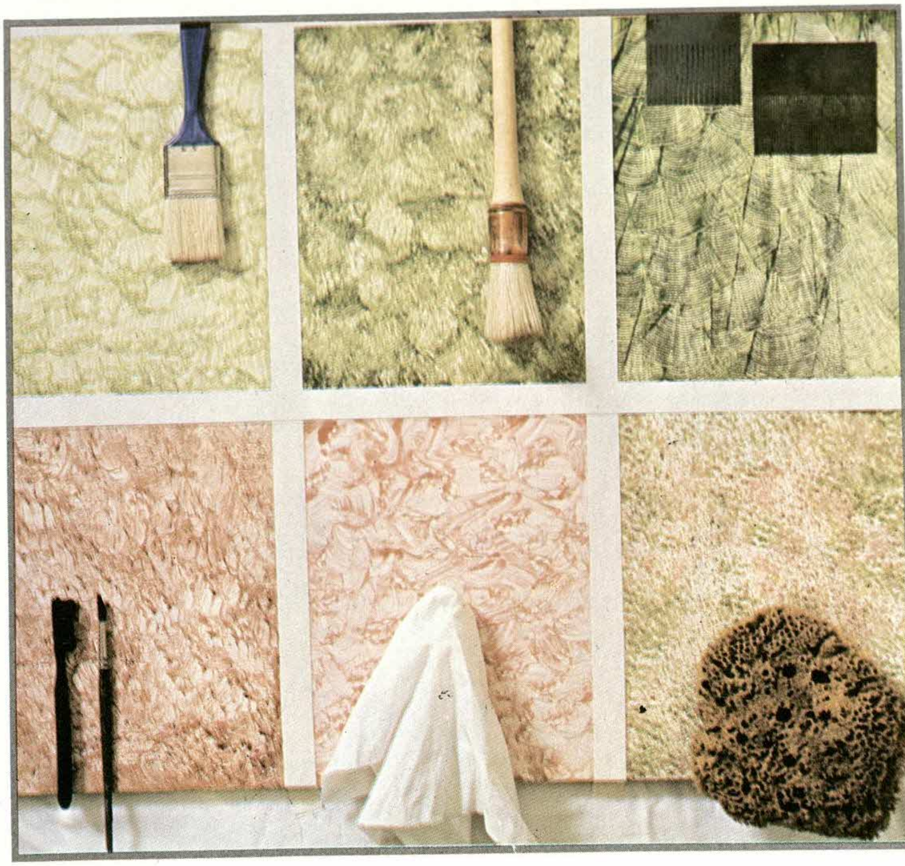
Texture

Different textures can be given to the finish by making a thick impasto or adding seeds, sand or even grass to the acrylic paint. The impasto or paint is splodged on to the background.

Left: a marble style finish was given to this old washstand and chair producing an attractive dressing-table set.

Above: this fanciful marble effect was produced by using a toothbrush to paint pink over a white background.

Below: all sorts of brushes, sponges, combs and cloths can be used to create distinctive fun finishes.



100 Idees de Marie Claire/Duffas

Brushes for craft work

Design know-how 83

Many different types of brush are available from art shops. Each type is designed for a special purpose.

Water-colour brushes

The most suitable type of brush for water-colour is made from sable hair. These brushes keep their shape and spring and enable easy control and manipulation of paint. Sable brushes come in various qualities: the top quality is expensive and specially made for use by water-colour artists, the cheaper varieties are adequate for amateur artists and for most craft work.

The standard shape of sable brush is suitable for most painting and is available in different sizes. There are, however, several specially shaped sable brushes for producing certain effects.

Short, pointed brushes have far more spring, are easier to control and are used for very detailed work such as painting miniatures.

Longer brushes give a finer point and will carry more paint.

Elongated brushes with straight-cut ends, such as the 'Cotman' sable made by Winsor and Newton, give a neat, sharp edged line to a water-colour wash.

Lettering brushes have cut off points, and give a neat, crisp line.

Fan brushes are fan shaped and are used for blending wet paint to represent certain textures, or to soften the line between two colours.

Wash brushes are very large and are used for covering broad areas with a water-colour wash.

Opaque water-based paint such as poster paint or powder paint can also be used with hog hair brushes when fine, detailed work is not being done.

Also available for use with water-based paint are brushes made from cheaper hair such as squirrel. These can be used for painting detail, but they do not have the spring of sable brushes and tend to go out of shape when wet.

Oil-colour brushes

Hog hair brushes are normally used for oil paint owing to their resilience and ability to control thick paint. They differ from water-colour hog hair brushes in that they are generally of a superior quality. Oil-colour hog hair brushes can be expensive if top quality hair is used. These brushes come round or flat in cross-section with round, straight or oval tips. The oval type is more suitable for painting detail.

Other types

Apart from the oil- and water-colour brushes there are several brushes specially made for other purposes.

Stencilling brushes are very short and stubby and are used for painting over cut-out stencils. They come in a variety of sizes and can be used with oil or water paint.

Gum or paste brushes are similar to stencilling brushes but are used for spreading glue.

Enamelling brushes are used for painting with enamel paints. They have short strong hairs of nylon or bristle.

Graining brushes and softeners are used for wood-grain imitation.

Caring for brushes

Good quality paintbrushes are not cheap so look after them properly.

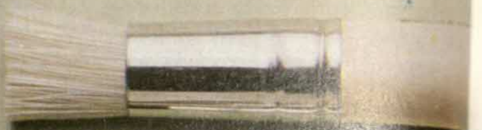
Cleaning is the most important aspect of caring for your brushes.

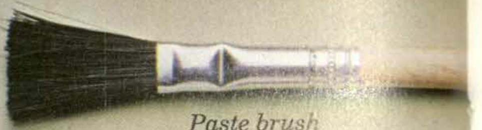
To wash brushes that have been used for water paint, run the brush under the cold tap, and gently rub the bristles on to a cake of soap. Work up a lather with the brush in the palm of your hand and then rinse. Keep doing this until all the paint is removed. Make sure there is no soap left in the brush after rinsing. Reshape the hairs and leave to dry by standing the brush, *bristles uppermost*, in a jam jar. Never leave a brush resting on its bristles.

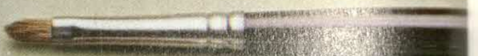
To wash brushes that have been used for oil paint, first rinse in white spirit and then follow the instructions given for water-colour brushes. To wash brushes that have been used for acrylic paint, wash as for the water-colour brushes.

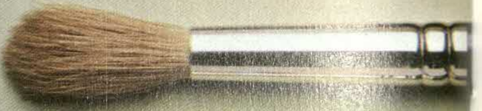
To store brushes for any length of time, make sure they are absolutely dry and place them lying flat in an air-tight tin.

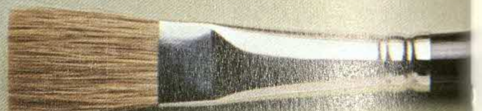
If acrylic or oil paint is allowed to dry on a brush, soak the brush in paint solvent and then wash as just described. Dried water-based paint can be removed with water.

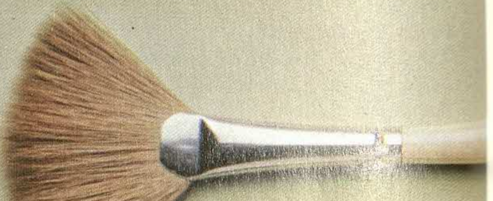

Stencilling brush

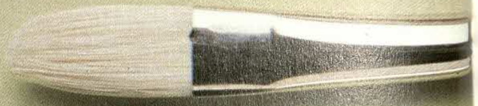

Paste brush

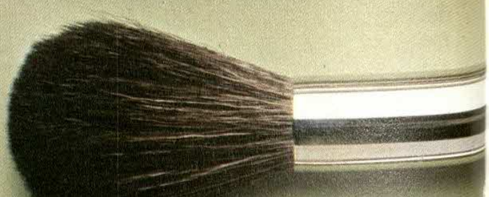

Short sable

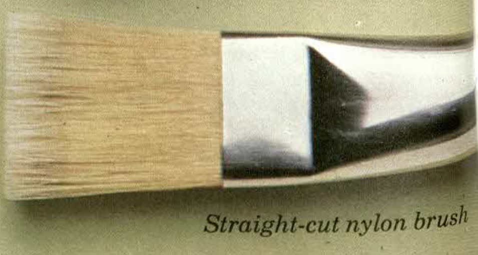

Round sable


Straight-cut sable


Sable fan brush

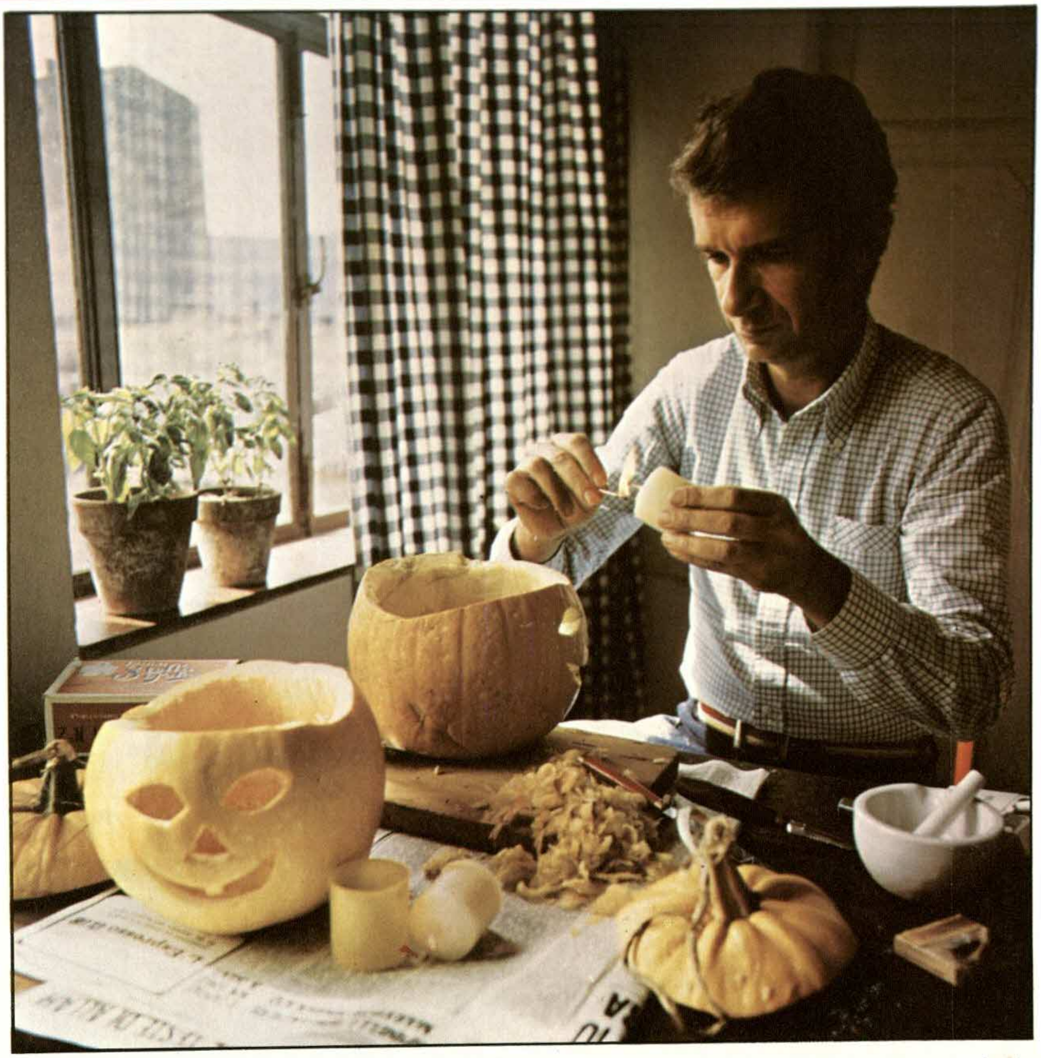

Hog hair brush


Squirrel hair wash brush


Straight-cut nylon brush

Paul Kemp

Creative ideas 89



Pumpkin jack-o'-lantern

There is no reason to wait for October 31 to make a jack-o'-lantern. Although closely associated with Hallowe'en and its customary festivities this decoration will add an eerie glow to the dinner table on any occasion.

You can make your own candle to place inside the lantern by following the instructions in Wax chapter 1, page 52.

To make an opening, cut round the thick, ribbed skin near the top of the pumpkin with a sharp knife. Remove the curved top in one complete section. Through the top opening extract the flesh and pips. Set these aside.

Gouge out oval eyes, a triangular nose and a mouth. Perhaps you could leave a 'tooth' in the gaping mouth for a difference in expression.

Finally place a lighted candle carefully inside the cavity. Replace pumpkin top.

The pumpkin flesh and seeds, which contain all the nutritional value, can be used in several recipes. The French make pumpkin jams and soups, while the Italians use pumpkin as a filling for sweet ravioli. But the pumpkin is probably best renowned for its part in the tasty pumpkin pie, which is so popular in America.

Above: make two jack-o'-lanterns at the same time. Below: subdued lighting and glowing lanterns create an exotic aura.

Camera Press

Modelling over chicken wire

Strong, malleable and relatively inexpensive, chicken wire makes an excellent mould to use with papier mâché for making larger items such as carnival masks, theatrical scenery, trees, rocks, birds, animals and even toys. The wire holds its shape well and enables large figures to be sculpted over it. The finished sculpture will be sturdy enough to withstand a great deal of hard use by boisterous children.

Materials

Wire. Chicken wire with 2.5cm (1″) mesh is the most suitable size wire to use for the framework, since it is soft enough to manipulate with the fingers, and yet the spaces are not too far apart to hold up the paper which is subsequently moulded round it.

Paper. Newspaper can be used quite effectively for modelling larger items, for example, when making something on the scale of the carnival monster in the photograph (page 2496). For smaller items which require a textured surface, such as the 'hobby fox' illustrated, use tissue paper.

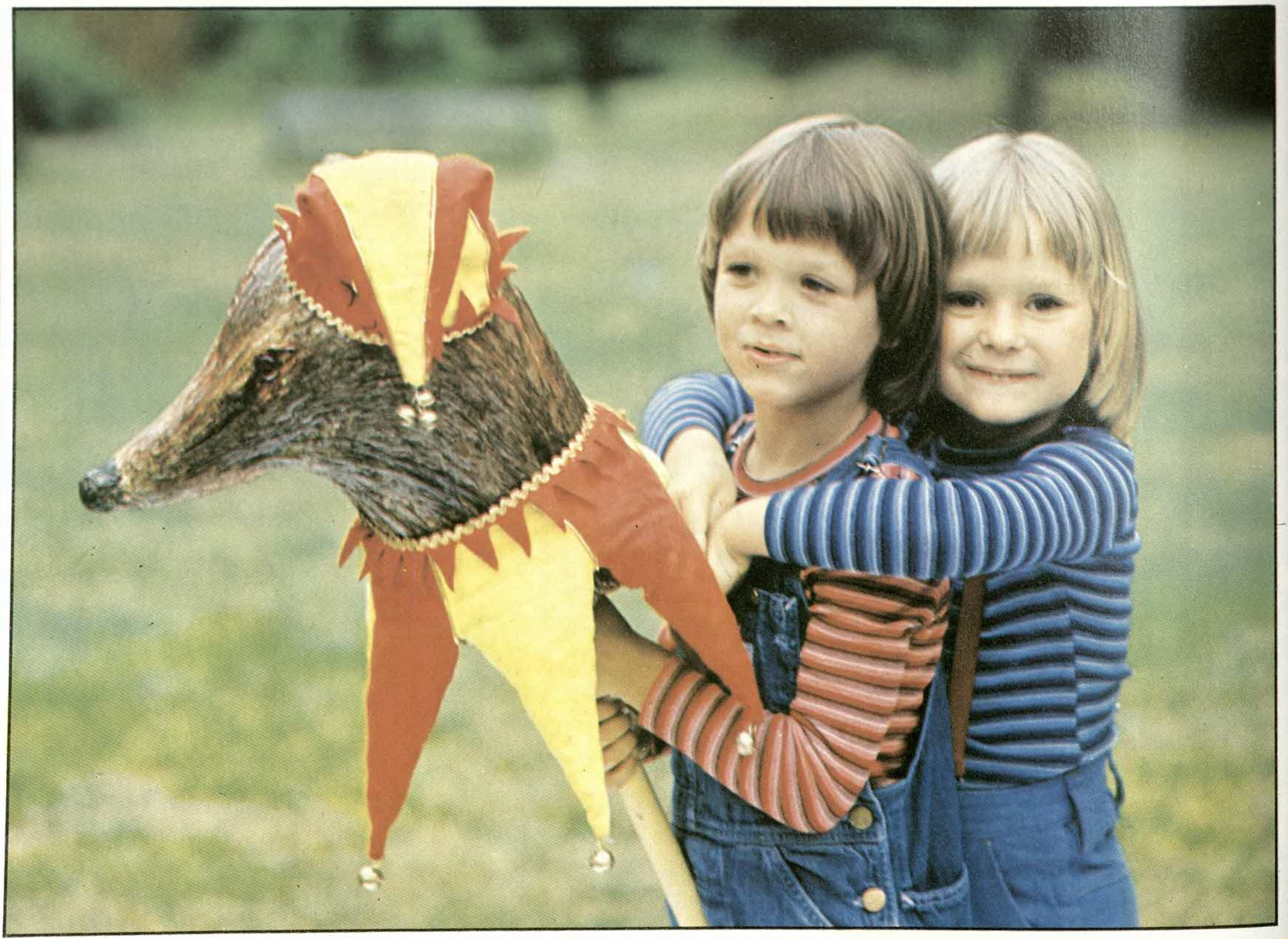
There are many different types of tissue paper available, but the best kind to use for modelling over chicken wire is the acid-free variety. It is softer than other types of tissue paper and this makes it easier to sculpt accurate shapes. Even quite small details can be shaped with ease. Acid-free paper is brilliant white and can take the palest of dyes. It is slightly more expensive than other tissues, but the results obtained make the extra price well worth paying.

Tissue paper can be bought in small quantities at most stationers, but if you are making a large number of items, such as props for a stage or for a carnival, it is much cheaper to buy the paper by the ream.

Pastes. Wallpaper paste such as Polycell and flour and water paste are the most suitable adhesives to use for sticking the paper to the chicken wire. Flour and water paste should be made in fairly small quantities as it will go mouldy if it is kept for a long time. However, it will keep for a few days if stored in a refrigerator. (For more information on pastes and glues for papier mâché, see Paper chapter 58, page 2186.)

Hobby fox

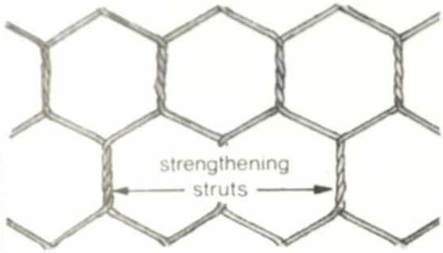
The 'hobby fox' illustrated is moulded on basic cylindrical wire shapes which are then manipulated into the final shape of the fox's head. Always make the tubes or cylinders with the strengthening struts (the double pieces of



This friendly looking hobby fox is fun to make—and to play with!

Sandra Lousada

wire which are twisted together) going up the tube vertically (fig.1),



Paul Williams

1. *Cut wire in the opposite direction of the strengthening struts.*

otherwise you will be unable to mould it easily.

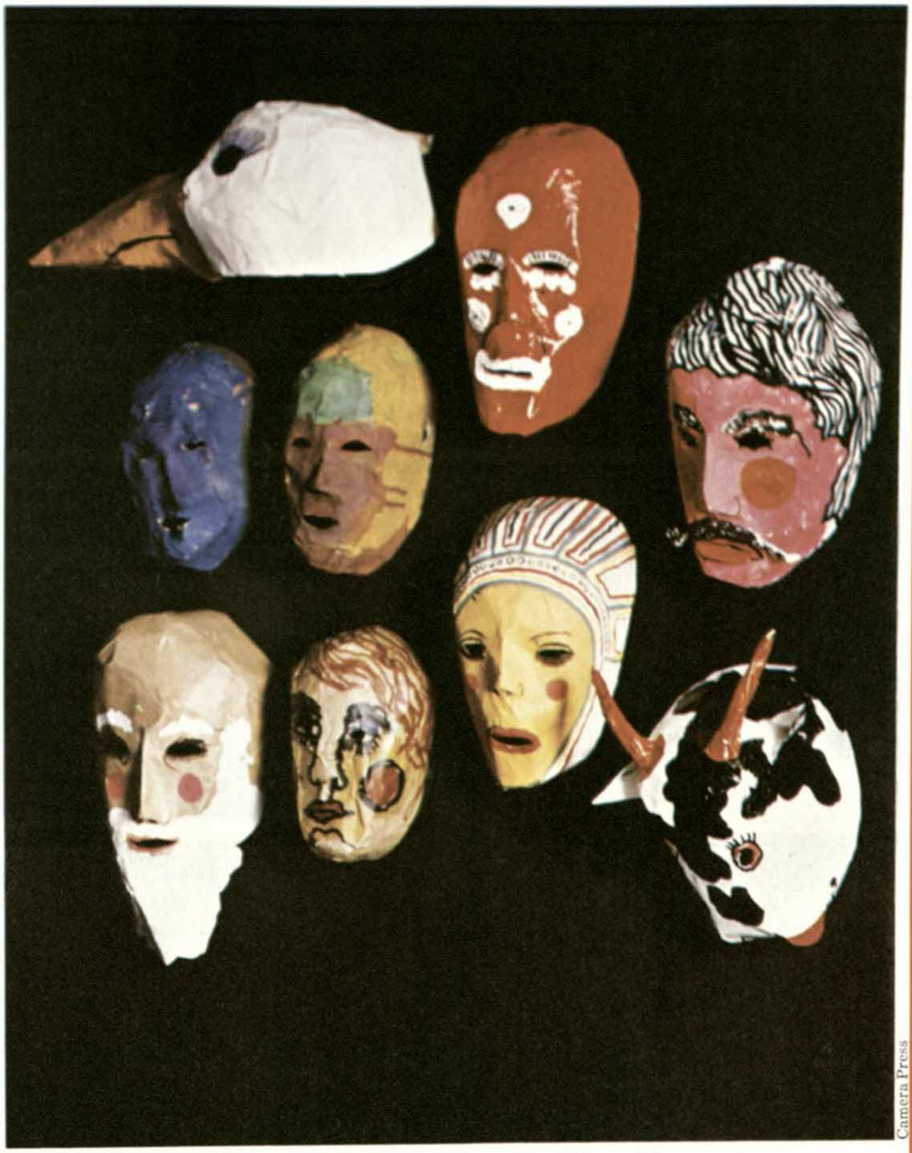
It is not necessary to tear the tissue paper into strips: simply apply one whole sheet of tissue paper at a time, folding it round the wire mould.

You will need:

A piece of chicken wire about 1m x 1m (1yd x 1yd).
140mm x 152mm (5½″x 6″) polystyrene block.
Seven sheets of white tissue paper, preferably acid-free, although any sort may be used.
A stick or pole, such as a broomstick or dowel, about 1.5m (5′) long.
A cardboard tube about 20cm (8″) long and 2.5cm (1″) in diameter, to insert in the head to receive the pole.
Four floral stem (stub) wires.
Sticky tape.
Dyes such as Dylon Cold Dye or coloured inks in shades of brown.
Wallpaper paste such as Polycell, mixed with water according to the manufacturer's instructions, or flour and water paste.
Two soft household paintbrushes.
Bowl or bucket.
Woodworking adhesive such as Evo-stik. Sticky tape such as Sellotape.
Clear polyurethane varnish. (If the fox is to be used on stage do not use varnish, instead use a fire-proof polyester resin—this is available in aerosol-spray form.)
Felt, bells, beads or buttons and braid for trimming hat and collar (optional).
Two glass eyes or buttons for the eyes.
A piece of cardboard about 10cm x 10cm (4″x 4″) to make the ears.
Latex adhesive such as Copydex, for the trimmings. Scissors, pliers.

☐ With the pliers, cut the chicken wire into two pieces, one about 30cm (12″) wide and one about 60cm (24″) wide, in the opposite direction from the strengthening struts (see fig.1).

☐ Fold the two pieces of wire into cylindrical shapes. Cut and fold the shorter, 30cm (12″) long cylinder into a cone shape (fig.2a). This shape forms the face of the fox. The two tubes must be strong and sturdy, so wind the cut edges of the chicken wire well into the main body of the tubes, except for those at the open ends of the tubes.

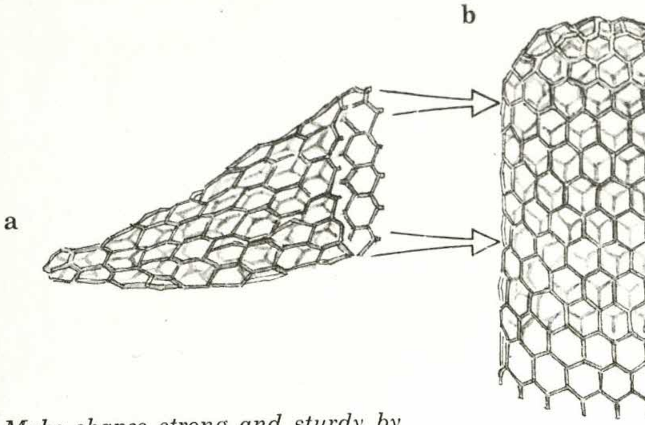


Camera Press

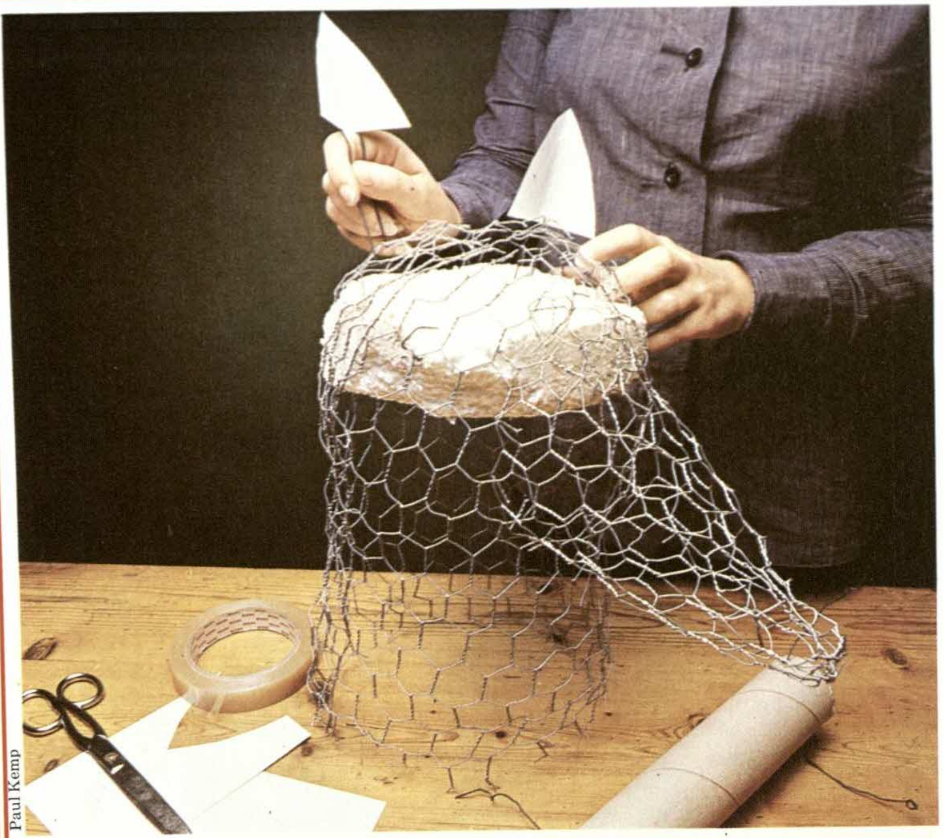
Modelling over chicken wire is ideal for making larger items, such as these brightly painted children's masks.

☐ Close top of cylinder (fig.2b) by squeezing it. and pushing the cut edges together. Attach the cone to the cylinder by winding the edges of the open end of the cone into the top end of the cylinder. Wedge the polystyrene block into the top of the head.

☐ Cut two ears from a piece of cardboard, folding each one in the centre (fig.3 overleaf), so that they can be



2. *Make shapes strong and sturdy by winding cut edges into body of tubes.*



Paul Kemp

3. *Dig the wire attached to the cardboard ears into the polystyrene block.*

bent forward to look more realistic.

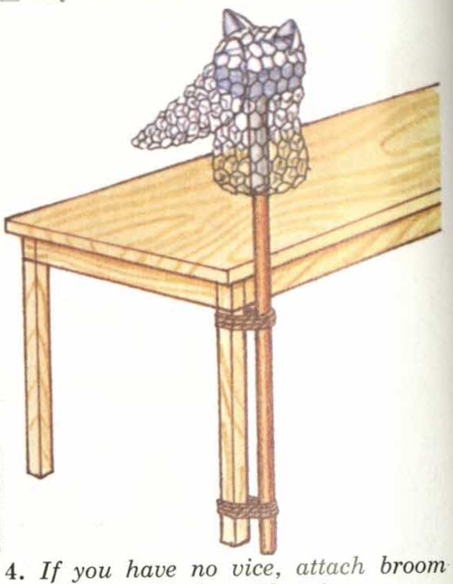
☐ Bend two stub wires at their centre and place each one centrally along the bent edge of each of the cardboard ears and attach with sticky tape. Thread the ends of the wires through the chicken wire at the top of the fox's head and push into the polystyrene block so that the ears are firmly attached and in position (see fig.3).

☐ Push the cardboard tube up into the neck of the head, until it touches the polystyrene block. Wrap two more stub wires round the tube and round the chicken wire, to hold the tube firmly in place. Make sure there are no protruding ends of wire. Bend any sharp ends inwards.

☐ Coat one end of the stick or pole with woodworking adhesive and push it into the cardboard tube inside the head, wedging it firmly.

☐ Tie the assembled 'hobby fox' to the leg of a table (fig.4), or fix the pole in a vice if you have one. This is to keep it steady while you apply the paper.

☐ Lay the sheets of tissue paper on a work surface and, with a paintbrush, apply a thin coating of paste to each side of a sheet, working on one sheet at a time.



Paul Williams

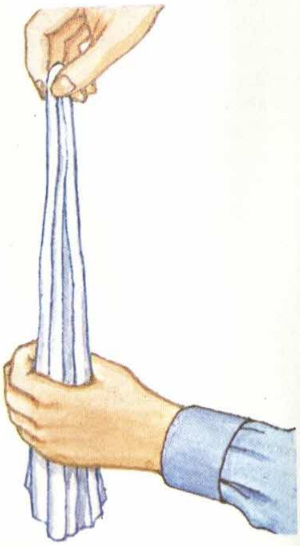
4. *If you have no vice, attach broom handle to a table-leg with string.*

☐ Cover the whole head of the fox with one layer of tissue and allow to dry. Pinch and form the head into the correct shape if necessary.

☐ Apply a second layer of tissue in the same way, again checking and altering the shape if necessary.

☐ To apply the surface texture as shown in the photograph opposite, paste a sheet of tissue paper and pick it up by one corner. Run your other hand lightly down from this corner of the paper to the opposite corner, to gather it into loose creases (fig.5). Do not squeeze it too tightly or it will lose the texture.

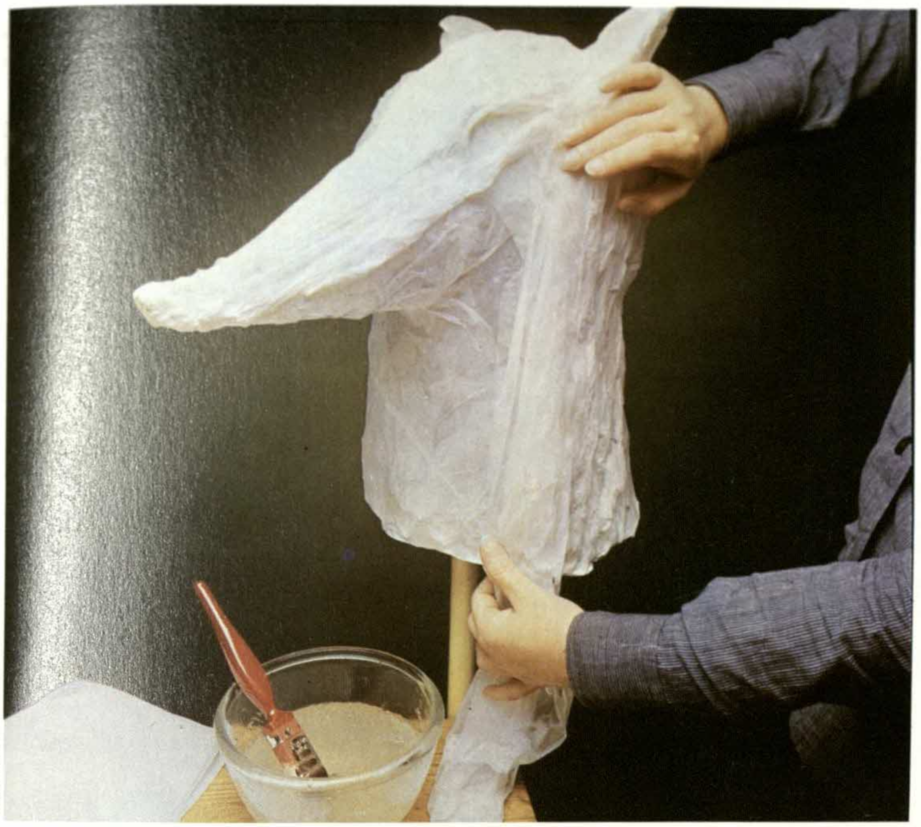
☐ Apply it to the fox with the creases running vertically down the neck and



5. *Create the texture with your hands.*

Horace Ové

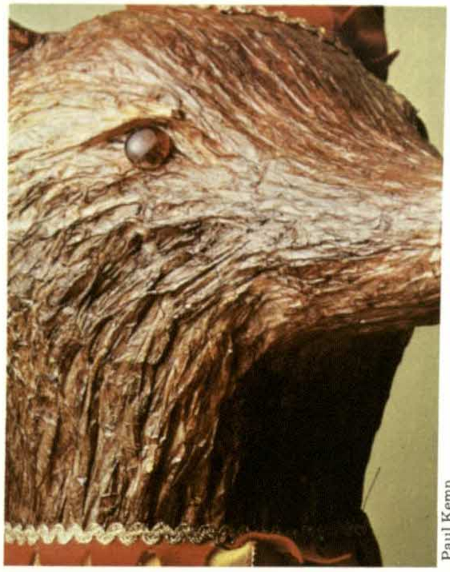
The green carnival monster from Trinidad is made from chicken wire and paper.



Paul Kemp

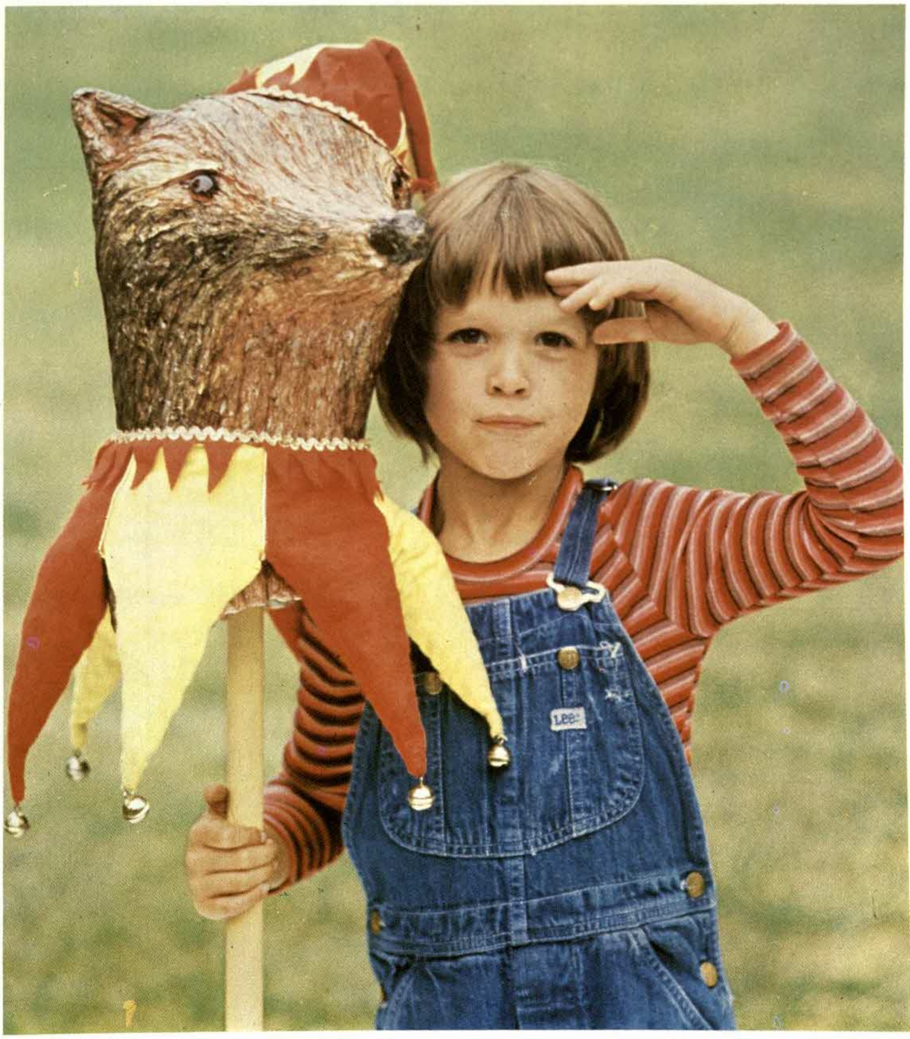
6. *Above: apply strips of paper horizontally along face and vertically down neck, building up the eye sockets.*

Below: close-up of the fox's head shows the surface texture and the various shades of brown dyes or inks used to colour it. The head is given two coats of clear polyurethane varnish before the trimmings are added.



Paul Kemp

Below: the fox, with felt trimmings.



Sandra Lousada

horizontally along the face, building up eye sockets gradually as shown above in fig.6.

☐ Repeat the process with more tissue paper until the whole shape is covered and textured. If you find that the paper appears to have shrunk a little when it has dried, apply more pasted, creased tissue to the shrunken areas. Leave for about a day to dry thoroughly.

☐ To colour the fox's head, mix up the dyes according to the manufacturer's instructions, or use coloured inks. Begin by painting on the lightest colours first, for example on the underside of the neck and the inside of the ears. Gradually build up the colour over the rest of the head, making the top of the head and the back of the neck the darkest areas. Allow to dry thoroughly.

☐ Apply two coats of clear polyurethane varnish, allowing the first coat to dry before the second coat of varnish is applied.

Trimmings. When the second layer of varnish is dry, stick on the two glass eyes or buttons for eyes with adhesive. If you wish, add a hat and collar or other decorations. The hat and collar shown here were made from coloured pieces of felt sewn together, trimmed with bells and braid, and attached to the fox with latex adhesive such as Copydex. Allow the glue to dry.

Jewelry from acrylic sheet

Plastics 25

Attractive and colourful acrylic jewelry can be easily and cheaply made from acrylic offcuts which are available from most acrylic suppliers. The acrylic can be used in many different ways to produce different styles of jewelry. In this chapter the basic techniques are discussed and instructions are given for making jewelry in two different styles. One new technique is introduced—that of shaping acrylic sheet.

Shaping

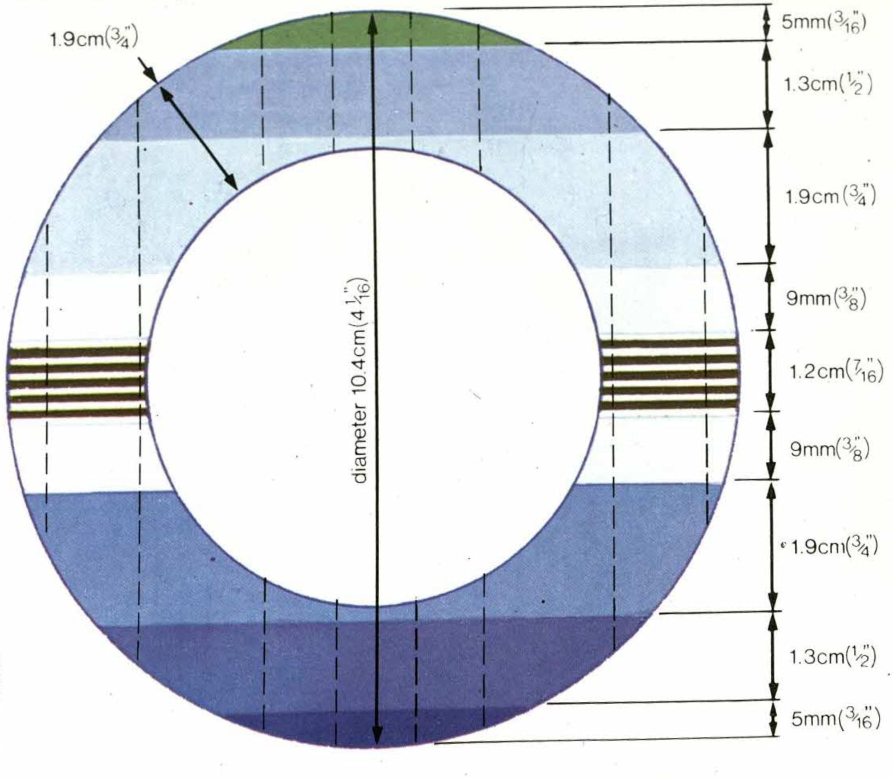
Bending acrylic sheet along a straight line is discussed in Plastics chapter 23 page 1684. The principle involved in bending acrylic to a curved shape is the same, ie the acrylic has to be heated to the right temperature and then bent against a solid shape. For shaping however, it is necessary to heat the whole piece of acrylic. This is done by placing the acrylic on a flat surface, such as a piece of tin foil in a baking tray, and putting the tray in a medium oven—about 66°C (150°F), gas mark 4—for ten minutes until the acrylic is very soft and pliable. The acrylic is then removed and wrapped round a cylinder of the appropriate diameter to make a bangle or ring.

While still round the cylinder, the acrylic is placed in a dish of cold water to cool and harden it.

When removed from the cylinder the surface of the acrylic may have become slightly distorted, and you will find that the outside edges will have curled up slightly. This can be remedied by sanding down with very fine silicon carbide paper and water to produce a smooth, matt finish.

Any bangle or ring made using this method will, of course, have a small gap where the two ends meet. This makes the bangle or ring slightly flexible and easier to put on.

One great advantage of working with acrylic is that it has what is called 'plastic memory' which means that if you make a bangle to the wrong shape, you can place it back in a hot oven for the same amount of time and the acrylic will return to its original shape.



1. *Cut two sets of shapes and one ring.*

Paul Williams

Laminating

In order to produce stripes of colour, or to let one colour 'glow' through another, pieces of acrylic are stuck together using special acrylic glue such as Tensol No.6.

It is possible to shape two pieces of acrylic that have been stuck together to make a striped bangle, but unless the pieces are stuck properly, and held together in a vice while setting, they will come apart during heating. When laminating with transparent acrylic the glue must be applied on areas that will not show since the glue distorts the surface of the acrylic.

Sanding

Acrylic sheet is sanded using silicon carbide paper and water. To ensure that the sanded surface of the acrylic will be flat, the silicon carbide paper is first of all stuck to a sheet of glass with double-sided tape and the acrylic rubbed against this.

When sanding the inside of curved surfaces the silicon carbide paper should be wrapped round a piece of dowel.

In order to produce a smooth matt finish the acrylic must be sanded with very fine silicon carbide paper and with very small circular movements. The surface can be made shiny by polishing with metal polish.

Most of the acrylic that can be bought as scrap is the standard thickness of about 3mm (⅛"). However, thinner pieces can be made by sanding down on one side to the required thickness.

Striped bracelet

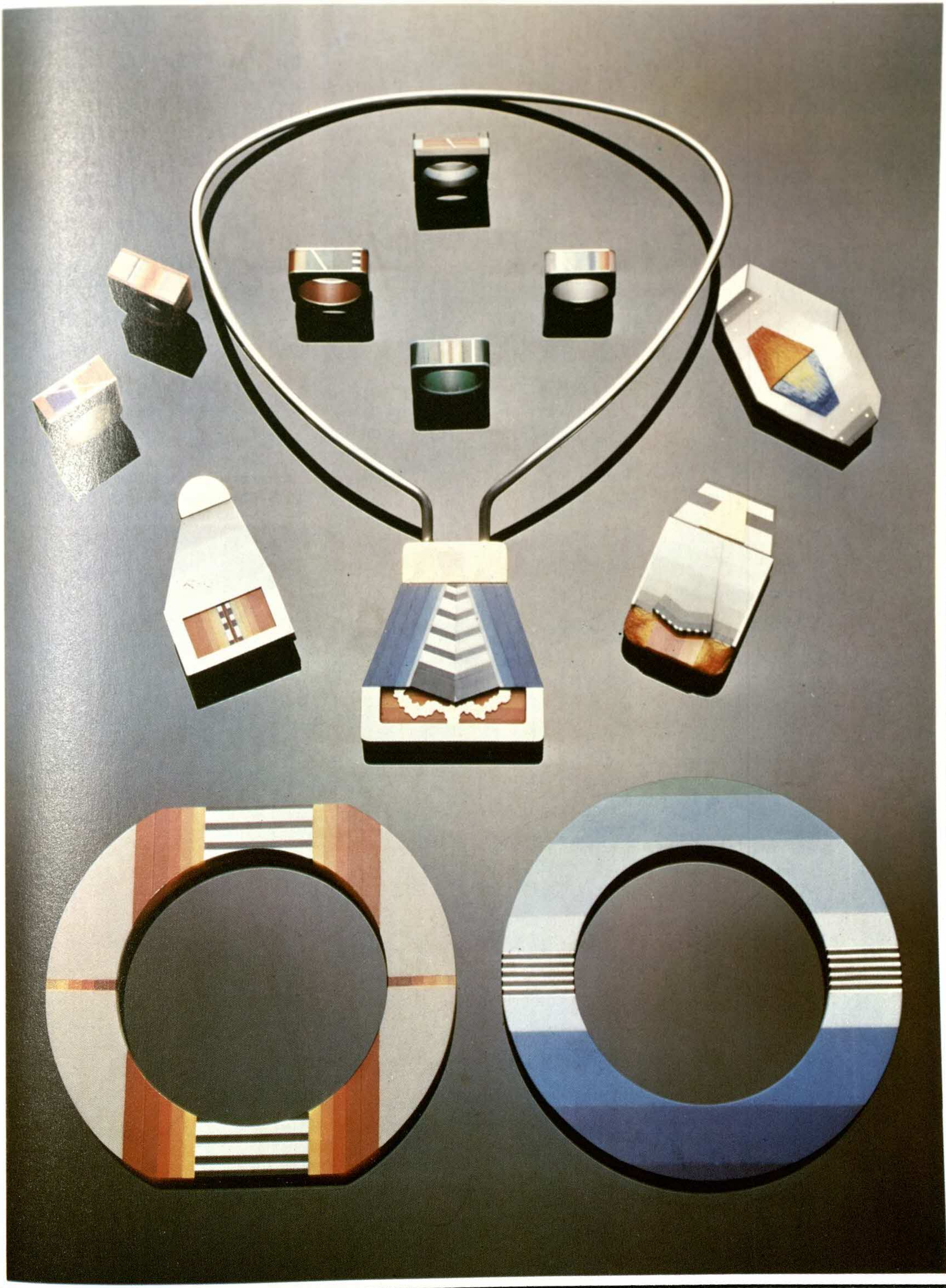
The blue bracelet is made of two layers of differently coloured acrylic stuck on either side of a central layer.

You will need:

Acrylic in the following colours and sizes:
Green and navy blue 1.3cm x 5cm (½"x 2").
Royal blue 2.5cm x 8.5cm (1"x 3¼").
Pale turquoise and mid blue 10.5cm x 4cm (4¼"x 1⅝").
Pale blue 4.4cm x 4cm (1¾"x 1⅝").
White and black 3cm x 2.5cm (1¼"x 1").
Turquoise 13.2cm x 10.5cm (5¼"x 4¼").
Acrylic glue such as Tensol No.6.
Silicon carbide paper medium and fine.
Piece of glass about 30cm (12") square.
G-clamp.
Drill with a 6mm (¼") bit.
Small piece of wood.
Piercing saw or coping saw with very fine blade.
Paper and chinagraph pencil.
Piece of dowel.
Metal polish such as Brasso.
Double sided tape.

☐ Enlarge the pattern pieces in fig.1

Right: acrylic jewelry by Roger Morris.



Paul Kemp

to the measurements given. If the acrylic still has the protective paper on it, draw the shapes on to this. If not draw the pattern shapes on to the surface of the acrylic with chinagraph pencil (this can be rubbed off later).

The black and white striped areas could be made from two solid pieces of white and two of black acrylic as cutting strips of less than 2mm ($\frac{1}{16}$") wide is difficult.

2. *A piercing saw for cutting acrylic.*

Use the piercing saw (fig.2), to cut out two sets of the shapes shown in fig.1, and one solid bracelet shape (this should be cut from the turquoise).

When using the piercing saw cut on the downward stroke and use long strokes to avoid overheating the blade.

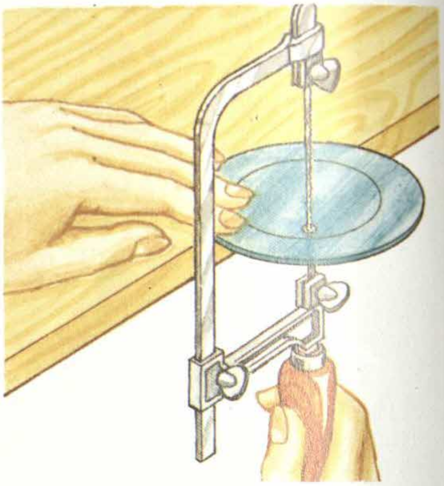
☐ To cut out the inside of the bangle, secure acrylic in G-clamp protecting it with a piece of wood, and drill a hole in waste area of the acrylic disc, undo one end of the blade, slot the blade of the piercing saw through the hole and do it up again (fig.3).

☐ Following fig.1, stick one set of shapes on to one side of the solid turquoise shape using the acrylic glue.

☐ Turn the bracelet over and stick the other set of shapes on the other side as indicated with a dotted line in fig.1.

You may find that the different coloured pieces of acrylic are not exactly the same thickness. This will be evened out in the final sanding.

☐ Stick a piece of medium silicon carbide paper to the piece of glass with double sided tape.



Paul Williams

3. *Drill a hole and insert the blade.*

Red acrylic bangle and ring designed by Norman Fisher.

Geoff Howes

☐ Sand down the two sides of the bracelet by rubbing on to the silicon carbide paper.
☐ Sand the inside edge of the bracelet with a piece of silicon carbide paper wrapped round a piece of dowel.
☐ Next sand all the edges with the fine silicon carbide paper in the same way. This will result in a smooth, matt finish. If you wish to polish the acrylic further use a metal polish.

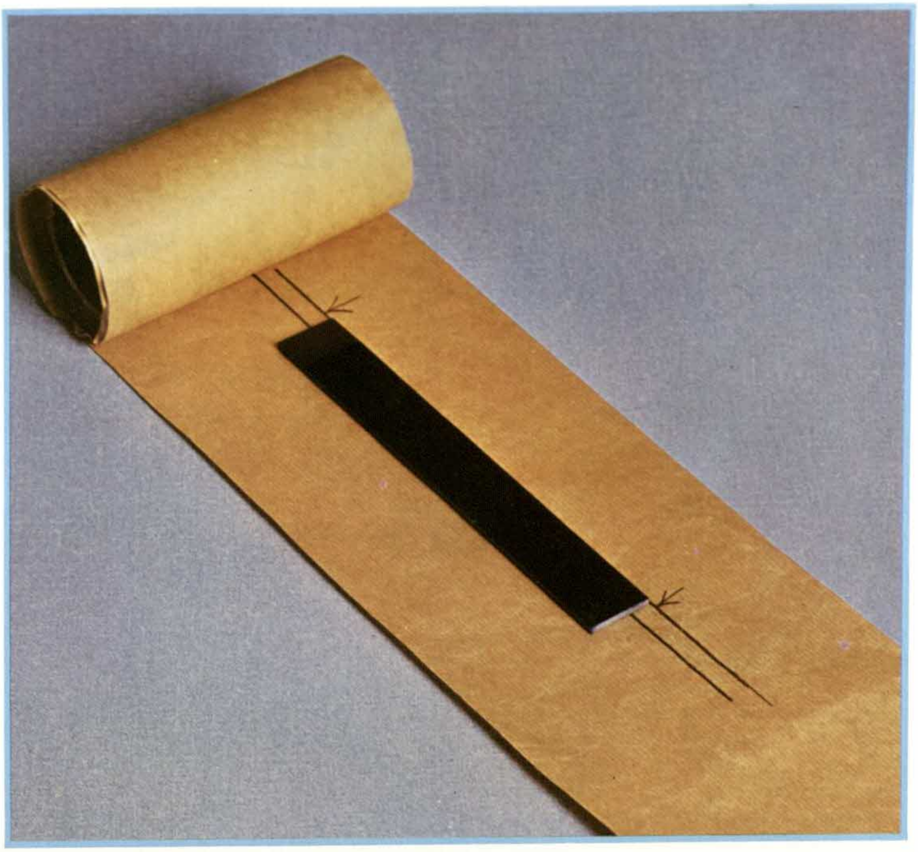
Bangles and rings

These are made using the shaping technique discussed at the beginning of this chapter.

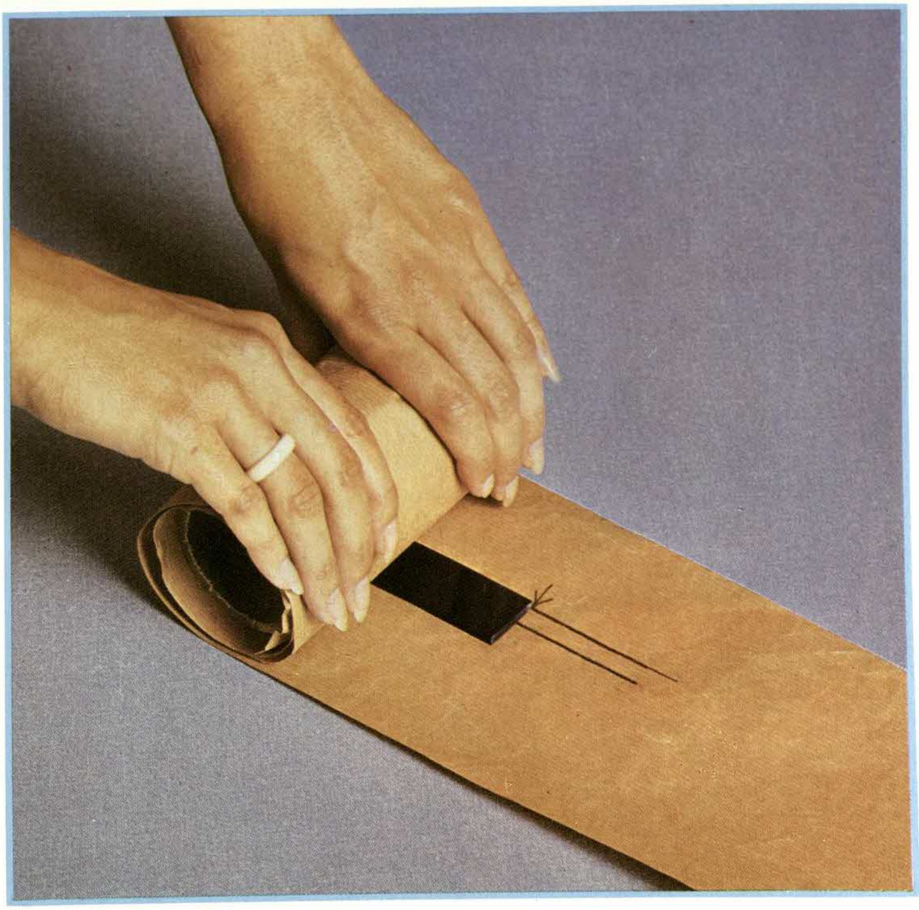
You will need:

Acrylic sheet scraps about 30cm (12″) long for the bangles and about 5cm (2″) long for the rings and as wide as you like.
G-clamp and hack saw.
Silicon carbide paper, medium and fine grade.
Metal polish such as Brasso (optional).
Two cylindrical formers of suitable diameter such as biscuit tins or dowelling to make bracelets and rings.
Pieces of stiff paper and pencil.
Gas or electric oven.
Asbestos gloves.
Sheet of tin foil and baking tray.
Dish of water.
Tape measure.

☐ Measure the circumference of the cylinder and cut the acrylic about 3mm ($\frac{1}{8}$″) shorter than this.
☐ Secure the acrylic in a G-clamp and cut to the required length, and as wide as you want the bangle to be.
☐ Meanwhile, heat the oven to about 66°C (150°F), gas mark 4.
☐Place the cut piece of acrylic on the tin foil on a baking tray and place in the oven for about ten minutes.
☐ Draw a line lengthways on the paper.
☐ Test that the acrylic is soft enough by lifting one corner with the point of a knife. It should be very soft and pliable. If blisters appear on the surface of the acrylic, the oven is too hot.
☐ Wearing the asbestos gloves remove the acrylic from the oven and place on the piece of paper along the line.
☐ Place the cylinder at right angles to the acrylic and start to roll the paper and the acrylic round the cylinder with the piece of acrylic sandwiched between the cylinder and paper.
☐ Immerse the cylinder, acrylic and paper in a dish of cold water to cool and harden the acrylic.
☐ Take acrylic bangle out and sand down as for the bracelet.
☐ If the bangle has not turned out well, replace in the oven, heat up again until the acrylic has regained its original shape and try again.
☐ Rings can be made in the same way using a cylinder with a smaller diameter.



Place the heated acrylic strip along the line drawn on the paper.



Dick Miller

Roll the paper and acrylic round the cylinder to make the bangle.

Carving balsa wood

For all its softness balsa wood is a member of the hardwood family. The terms 'hardwood' and 'softwood' are confusing and it must be borne in mind that they are botanical terms.

Balsa wood comes from the tropical regions of America and is almost white in colour. It is very buoyant and is used extensively in the construction of rafts and lifebelts and in some parts of aircraft.

Once used as hunting lures, these picturesque balsa wood decoys are now popular as ornaments in the home.

Jerry Tubby

1. *Laminating the pieces of balsa wood.*

2. *Cutting off waste with coping saw.*

Geoffrey Frosh

3. *Whittling the decoy with a knife.*

Many people will be familiar with model aeroplanes and boats which are constructed from balsa wood. The softness and close grained texture of the wood makes it ideal for modelling. Almost any sharp implement can be used to carve it and this chapter shows you how to carve decoy ducks with a simple household utensil such as potato peeler or a sharp kitchen knife. The largest readily available pieces of balsa wood are in 90cm (3′) lengths, 50mm x 50mm (2″x 2″). You may find some pieces 100mm x 100mm (4″x 4″).

Decoys

The American Indian hunters were the first people to use decoys; a simple and ingenious device used to lure wildfowl into the range of concealed hunters. The early decoys were crudely made of mud and dried grass but these developed into closely simulated bird forms of stuffed skins and painted objects.

The colonists were quick to follow the example of the Indian and began carving their own decoys. Soon, professional decoy makers began to flourish and the craft has become a form of American folk art which still continues. The exquisitely carved and coloured decoys of these past masters is a legacy of the varied bird life that has vanished from the American skies.

The decoy makers used well-aged pine or cedar and sometimes driftwood. Here, balsa wood is used because it is soft and easy to carve. Because of the sizes of balsa wood you will have to build up a suitably sized block by laminating layers of wood.

The decoys shown here are based on the shape of the Canada goose. A source for various bird shapes can be found in natural history books which should also provide you with a guide to the colourings of the birds.

The colouring of the decoys is a matter of debate. Some believe that the more 'realistic' the colouring, the more effective the decoy, while others hold that a more impressionistic colouring should be used. It depends on your painting skill and personal preference.

You will need:

Four pieces 50mm x 50mm (2″x 2″) balsa wood 90cm (3′) long.
Potato peeler or kitchen knife.
Craft knife (optional).
Fret saw or coping saw with a fine blade.
Pencil, tracing paper and carbon paper.
Balsa wood sealer.
Enamel paints.
Medium and fine grade glasspaper.
Balsa cement.

☐ Cut the pieces of balsa wood into 30cm (12″) lengths.

☐ Glue the pieces to form a laminated block 20cm (8″) high and 15cm (6″) wide (fig.1).

☐ Enlarge the pattern graph given and transfer the design to the laminated balsa wood. Be sure to transfer all the sides correctly (see Modelling chapter 5, page 1302).

☐ Cut off the larger pieces of waste with a fret saw or coping saw (fig.2).

☐ You can then begin whittling with the potato peeler or knife (fig.3). Work down to the basic outline, keeping the base flat.

☐ Working more carefully, add finer detail where necessary.

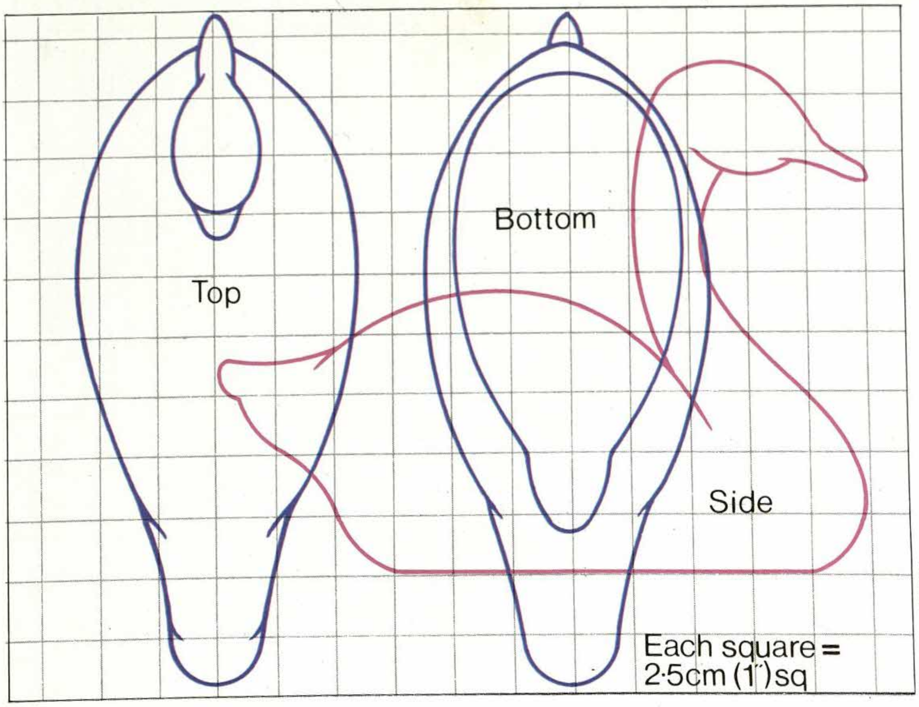
☐ The decoy is then smoothed down with fine grade glasspaper.

Where necessary use the medium grade glasspaper to remove larger areas but remember that the wood is very soft.

Finish

The completed decoy is wiped with a damp cloth to remove any dust and then allowed to dry. Before painting, the decoy must be sealed with wood sealer. As it is very absorbent, the wood will probably need a couple of coats. The decoy is then painted using the enamel paints.

A graph pattern for the decoy ducks.



Trevor Lawrence

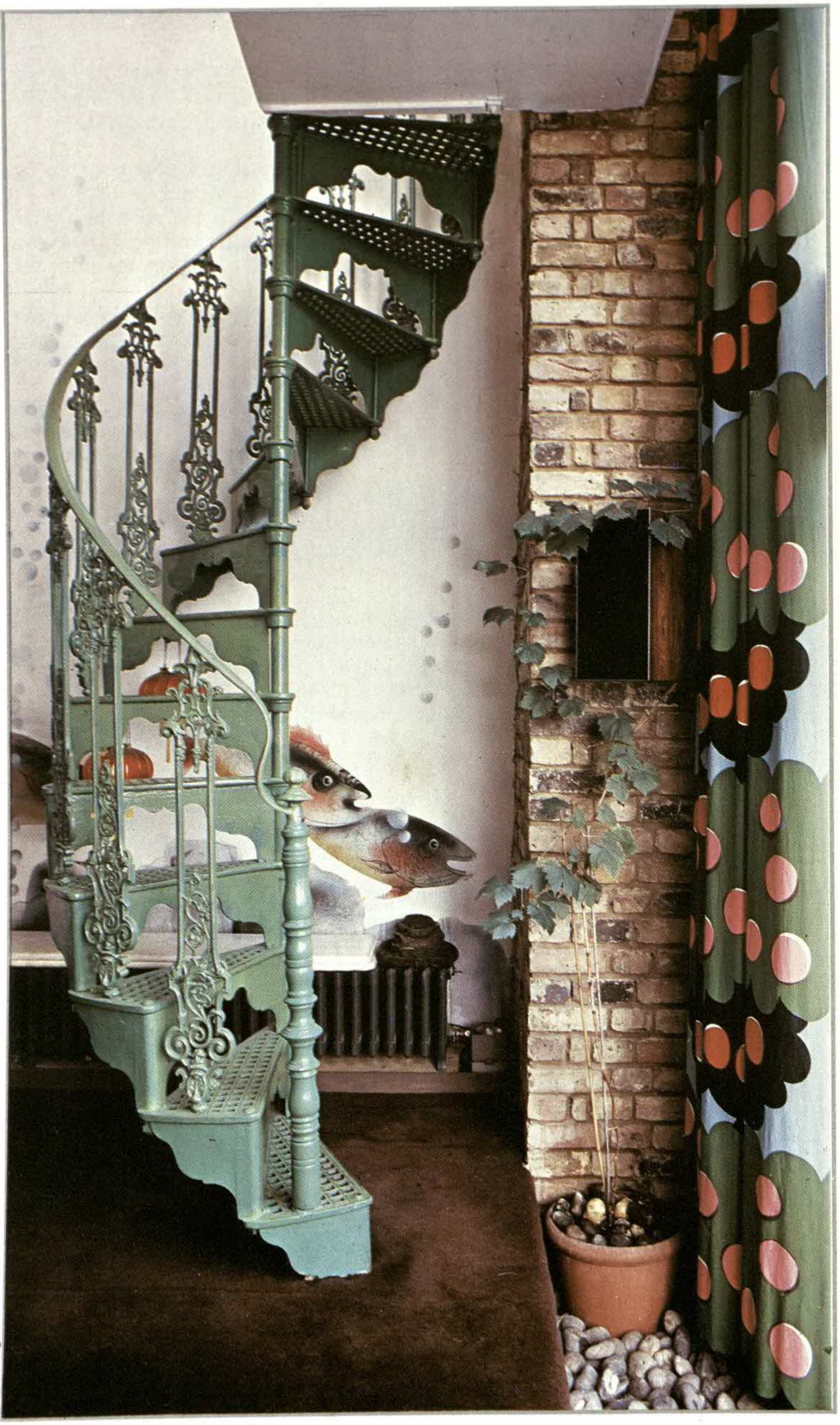
Painted ironware

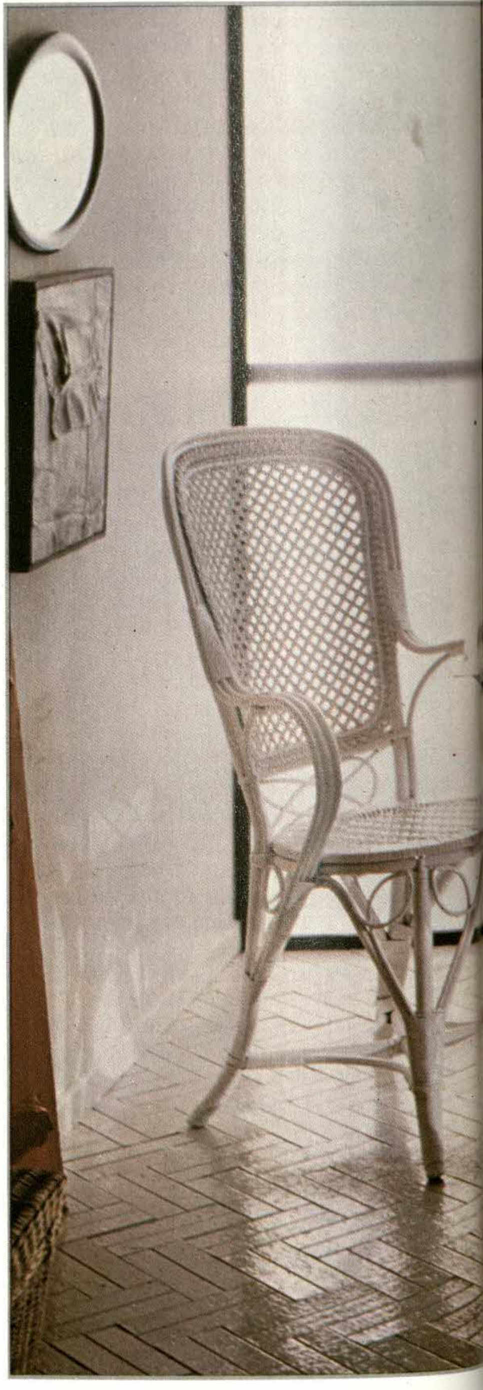
Junk shops and scrap metal yards abound in old pieces of ironware. These, once cleaned and painted, can make unusual additions to the home and garden.

The iron staircase illustrated started life as a fire escape—restored and painted it makes a novel open work staircase.

Old farm machinery, often found lying abandoned round the countryside, once restored and imaginatively painted, can make attractive garden ornaments. Another good source of old ironware is

Left: a fire escape restored as a staircase. Below: a sewing machine base used as table legs.





Liz Whiting

public rubbish dumps. Often they may have odds and ends which, with a little ingenuity and a few coats of paint, can be given a new lease of life.

Old iron lamp posts will normally be in good repair as they were painted so frequently—iron if completely covered with paint will not be in danger of rusting—these make fascinating garden lightstands.

Garden or indoor tables can be made using the base of old treadle sewing machines. Old iron bedsteads when painted bright colours make fun bedroom furniture. Even iron tube radiators can be painted with brightly coloured designs giving an individual touch to any room. Old clothes irons can be painted and used as paperweights or book ends.

Painting ironware

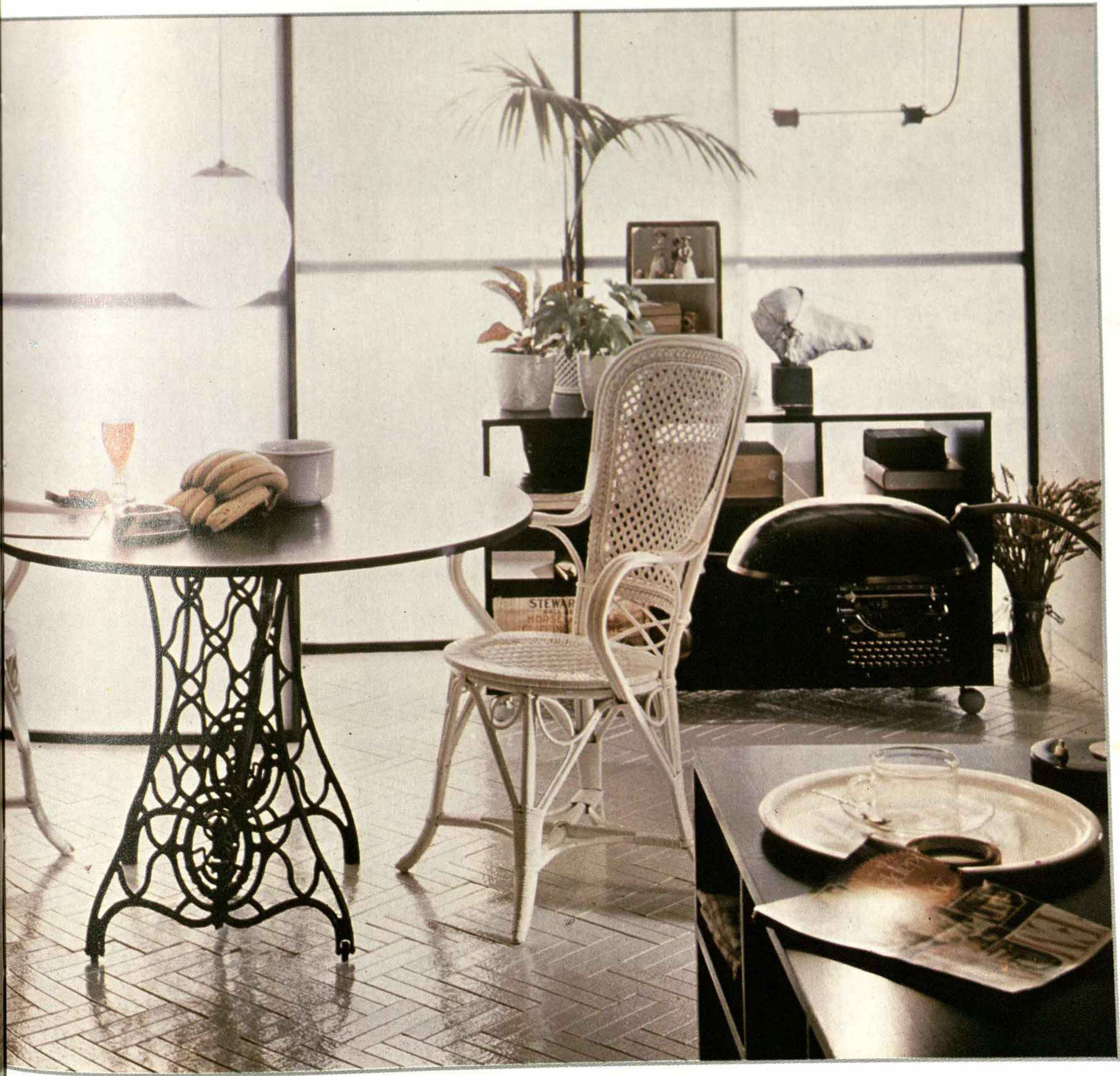
Before painting any ironware all traces of rust should be removed. Use a rust remover such as Jenolite and carefully follow the manufacturer's instructions. Alternatively, use a wire brush to remove the rust. In both cases make quite sure that every single bit of rust has disappeared before priming and painting.

Primer. The metal must now be primed. If possible use red lead (this is a highly poisonous substance and not always available to the general public). Failing red lead, use a red oxide primer such as Plynole. The item should be completely covered with the primer and then allowed to dry.

The metal is now ready to receive the paint.

Paint. Outdoor pieces and those which will receive hard wear need a heavy-duty paint such as Tractol—indoor and purely decorative ironware can be painted with gloss or matt emulsion.

Apply an undercoat of the appropriate paint. Allow this 24 hours to dry and then apply at least three layers of top coat. The more layers of paint the better the protection given to the iron. Apply the paint with a brush rather than aerosol as the cover will be thicker to guard against rust.



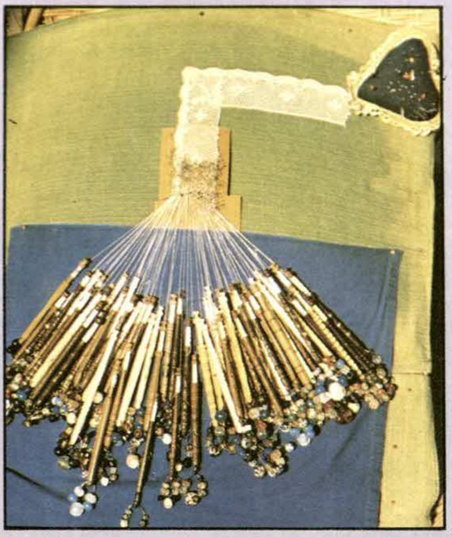
Camera Press

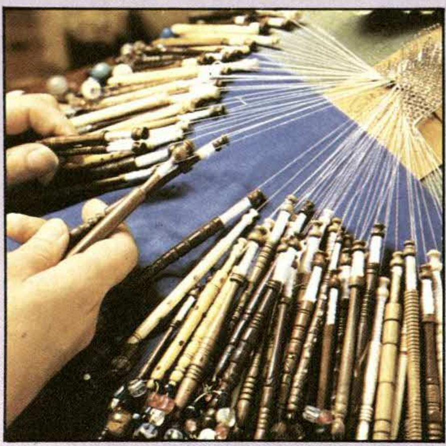
Introduction to bobbin lace

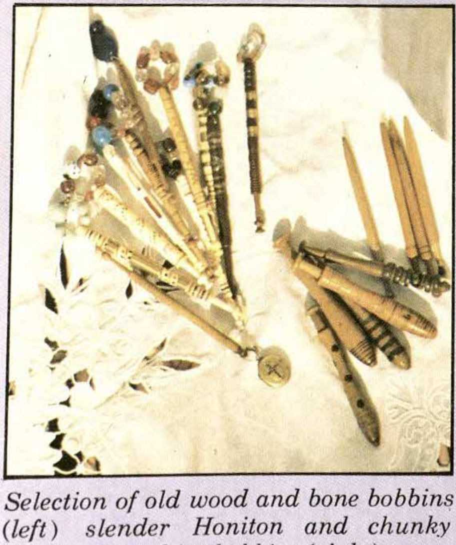
Yarn — bobbin lace 1

Bobbin lace is the art of twisting or weaving threads together to form a pattern. Traditionally, the pattern is first pricked out on parchment which is pinned to a pillow. The thread is wound on bobbins—hence the name—which are hung in pairs from pins.

Lace made on the principle of twisting threads is known to have been produced in Ancient Egypt. It was not until the 15th century, however, that


Geoff Howes


Jerry Tubby


Geoff Howes

Selection of old wood and bone bobbins (left) slender Honiton and chunky Buckinghamshire bobbins (right).

Geoff Howes

bobbin lace was developed. It is thought to have originated in Italy, and quickly spread to France and the Low Countries and, in the latter half of the 16th century, to England.

As demand for lace from the Church and the wealthy aristocracy of Europe increased, so the art of bobbin lace grew to be a fine and well-established art by the end of the 17th century. The importance of the lace tradition is reflected in the words of Dr Samuel Johnson in 1780: 'Greek, Sir, is like lace; every man gets as much of it as he can.'

Although all bobbin lace is formed from the same basic stitches, the stitches were combined in different ways in different areas, and the resulting varieties of lace were often named after their place of origin such as Brussels, Bruges and Chantilly. The lace produced in each area had a special pattern of its own—thus Cluny lace is characterized by leaves, Maltese lace by a cross, and so on. The three main English laces, still made today, are Honiton, Bedford and Buckingham.

There is no hard and fast rule as to which lace should be learned first. The following chapters describe the basic stitches and give instructions for

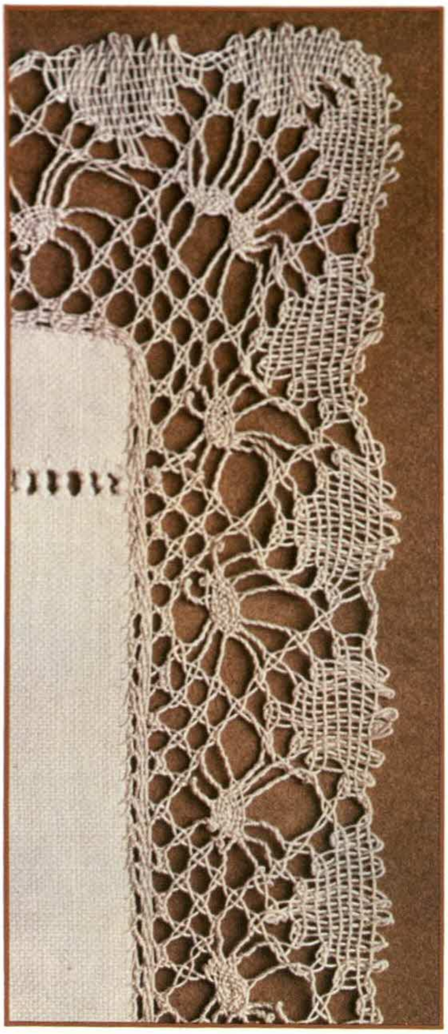
Bobbin lace is a relaxing and highly rewarding craft which can be practised both indoors and out.

Geoff Howes

Geoff Howes

Paul Kemp

Top: modern Torchon prickings. Middle: old Buckingham parchments. Bottom: Honiton, Torchon and Maltese.



Typical Torchon pattern with 'spiders'.

making Torchon lace. This lace is so called from the French word for rag, and is sometimes also known as 'dish-cloth' lace. Characterized by a shell pattern, it is one of the simpler types of lace and serves well as an introduction to the craft of bobbin lace.

Materials

The materials for bobbin lace are inexpensive and easy to obtain or to make oneself.

Bobbins

Thread is wound on to bobbins in pairs. The bobbins act as reels for thread, as handles to manipulate the threads and as weights so that the threads remain taut.

Since bobbin lace is a craft that has been practised for centuries, many old bobbins can be found in antique shops. They are usually expensive, however, since they have now become collectors' items.

Just as different regions developed their own lace patterns, so they made their own types of bobbin, from the simplest to heavily carved ones inlaid with silver or brass. They were usually made of wood, bone or ivory and often had beads or 'spangles' threaded on to the end for extra weight to increase the tension of the thread and to stop them from rolling around when not in use.

Modern bobbins made of wood and plastic are inexpensive and can be obtained both with and without spangles. If they are unbeaded, simply push a thin wire through the hole at the end of the bobbin to make a loop and thread on five or six beads.

The size and weight of the bobbins needed depend on the thread used. For the work described in these chapters it is only necessary to buy medium-sized bobbins. To begin with, for the basic stitches used here, twelve bobbins are sufficient.

Making bobbins

It is also possible to make your own bobbins from dowelling. Use 6mm (¼") dowelling and cut off a piece about 11.5cm (4½") long for each bobbin. Whittle out a space with a sharp knife about 2.5cm (1") long near one end. Smooth this section with glasspaper as this is the part on to which the thread is wound. (This is called the long neck.) Drill a small hole near the other end and thread on beads as for commercial unbeaded bobbins.

Pillows

Pillows used for bobbin lace making must provide a very firm surface into which pins can be stuck. A pin must remain in position when weighed down by bobbins.

Again, different areas developed their own types of pillow depending on the kind of lace being made. There are now three basic kinds of pillow used for bobbin lace—flat pillows, bolster pillows and round Honiton pillows.

As these are not easily available, and it is not possible to improvise with an ordinary pillow since this would be too soft, it is necessary to make a pillow oneself.

For the work described in these chapters, it is sufficient to make a flat pillow.

You will need:

45cm (½yd) of strong cotton fabric or unbleached calico, 90cm (36") wide.

40cm x 40cm (16"x 16") of 6mm (¼") plywood or hardboard.

Stuffing—chopped hay or straw is the best kind of stuffing to make a really hard cushion. If you cannot obtain hay or straw, you can use sawdust, or bran which is available from pet shops. Bear in mind, however, that the latter kinds of stuffing will produce a very heavy cushion.

☐ Make a fabric bag—finished size 40cm (16") square, allowing generous turnings of about 2.5cm (1") and leaving one side open.

☐ Push the piece of plywood or hardboard into the bag and stuff on one side only. Pack the bag as full as possible.

☐ Turn in the seam allowance on the open side and slip-stitch part of the opening to prevent stuffing from falling out. Leave a small gap in case you need to add more stuffing.

☐ Knead the pillow or hammer it with a mallet until it is very hard and even. You will probably need to add more stuffing as you work, until the bag will hold no more.

☐ Slip-stitch remainder of opening.

These two simple examples of Bedfordshire lace make particularly attractive borders for tray cloths.

Paul Kemp

Paul Kemp

A delicate Bedfordshire lace trimming for a fine linen handkerchief.

It is a good idea to make a removable cover for the pillow. This can then be washed easily whenever necessary.

You will also need two cover cloths about 30cm (12″) square. They should be made from a smooth fabric such as poplin, and preferably in a dark colour. One cloth is pinned over the lower part of the pricking not in use, over which the bobbins lie, to protect the threads. The other cloth is used as a dust cover when you are not working.

Pins

Pins are used to keep the bobbins in order and to hold the threads in place as the pattern is worked. They should be of brass so that they do not stain the lace, and preferably as long and as strong as possible, so that they can be pushed into the cushion without bending and can bear the strain of several bobbins. It is a good idea to use a pin cushion to store pins. This is usually pinned to the pillow for easy access.

Pricking card

The pattern is pricked out on pricking card which is pinned to the pillow. Traditionally, lacemakers used parchment, but today a special tough waxed card is used. To begin with, you can use two thicknesses of thin card glued together.

Photocopied sheets of lace pricking are obtainable for different patterns. Patterns can also be transferred on to graph paper from diagrams and pricked out in this way.

Pricker

This is useful for pricking out the pattern on the card. It can be made by forcing the eye of a needle into the end of a piece of 6mm ($\frac{1}{4}$″) dowelling. Alternatively, you can use a pin vice (available from hardware stores or lace-making suppliers).

Thread

Almost any size and type of thread may be used depending on the kind of lace and the desired effect. For the purposes of the work described in the following chapters, it is advisable to use a fairly thick thread. This is more easily obtainable than the fine linen lace thread, and is also more manageable for a beginner than the very fine thread necessary for more delicate patterns.

Introducing typewriter art

Paul Kemp

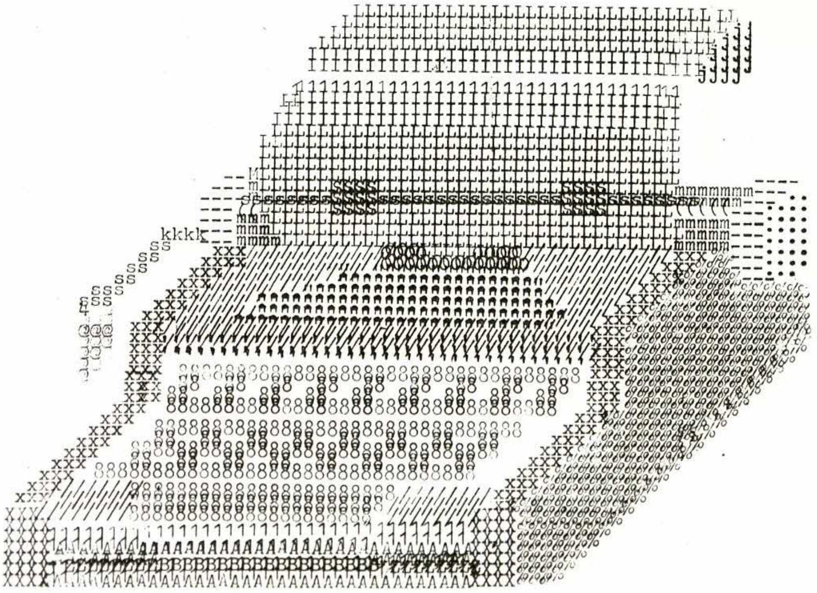
Any make of typewriter can be used.

Typewriter art is a method of constructing pictures, both figurative and abstract, by the use of the characters of a typewriter.

Typewriter drawings require both time and patience to produce though the craft is not limited to the trained typist. The typewriter had been invented by the 1870s and by the 1890s it was being used as an artistic medium. Early typewriter art was created principally using the keyboard's non-alphabetical characters—brackets, oblique strokes, full stops and so on. This has two main weaknesses. Firstly it produces an end product which could have been done just as well and far less painstakingly with pen and ink. Secondly it lacks the distinctive features given by a fuller use of the keyboard—the main feature of typewriter art.

Typewriter artists have been concerned with producing pictures and images which take advantage of the distinctive qualities of a typewriter. There are many different systems and techniques used which are discussed here and in a later chapter. Simple doodling, though fun in itself seldom produces anything accomplished. One typewriter picture, carefully planned, can take weeks to produce.

Typewriter art requires patience. 'Typewriter' was designed by Gary Blake.



London Magazine Editions

Materials

A typewriter is obviously essential. Any make of typewriter will do. However an electric typewriter limits the range of possibilities as the user has no control over the pressure of striking the keys.

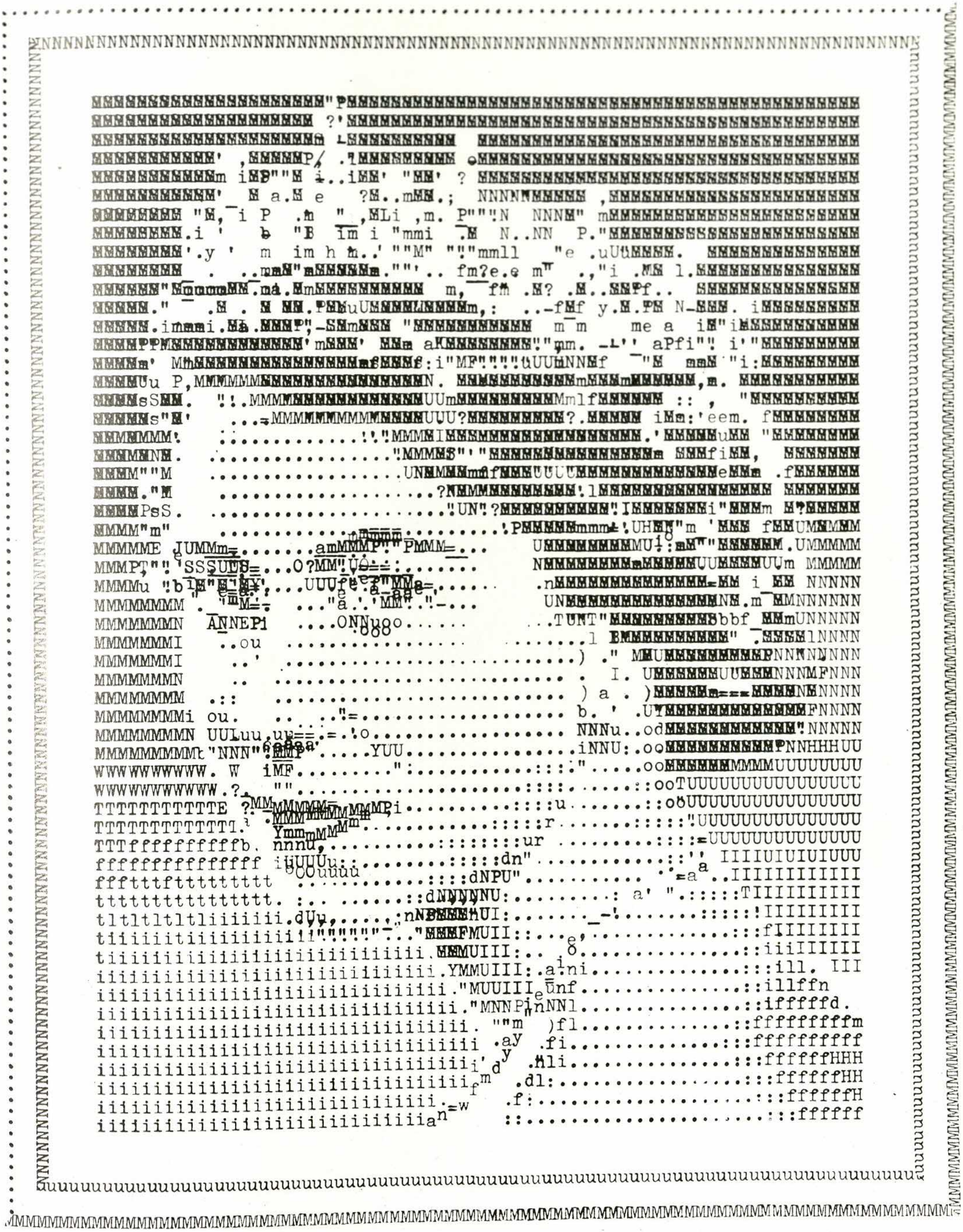
The standard, manually operated machine is far more practical. Whether the type face is elite or pica matters little except as the means for controlling the size of the finished product. Always bear in mind that not all typewriters are the same. For instance on some the angle of the oblique strokes is such that they cannot join up to produce a straight diagonal line. A little experimentation will reveal the capabilities of your own machine.

Paper. The choice of paper is very important. A matt wood fibre paper of between 80-100gm is considered the most suitable and may be purchased from most large printers or stationers. If a thin paper is used it will not withstand the repeated overtyping which is sometimes necessary to obtain shaded effects. Neither will it withstand the erasing of errors should they occur.

Glossy paper is not suitable for two reasons. The first is that the colours smudge too easily and come out looking very pale and the second reason is that by the constant turning up and down of the carriage the paper is more likely to slip and fall out of alignment.

Ribbon. Black ribbon when typed on to a white background is often sufficient for a typewriter design. However it is now possible to buy ribbons in a variety of other colours apart from the standard black/red and blue/red.

Colours available include brown, green, orange, yellow, purple, grey, maroon and magenta. To avoid the irksome task of changing spools when moving from one colour to another it is best to join several ribbons together on one spool with glue such as Uhu. Using 2 metre (2 yard) lengths of each colour, five colours will fit on one spool. This chapter deals mainly with



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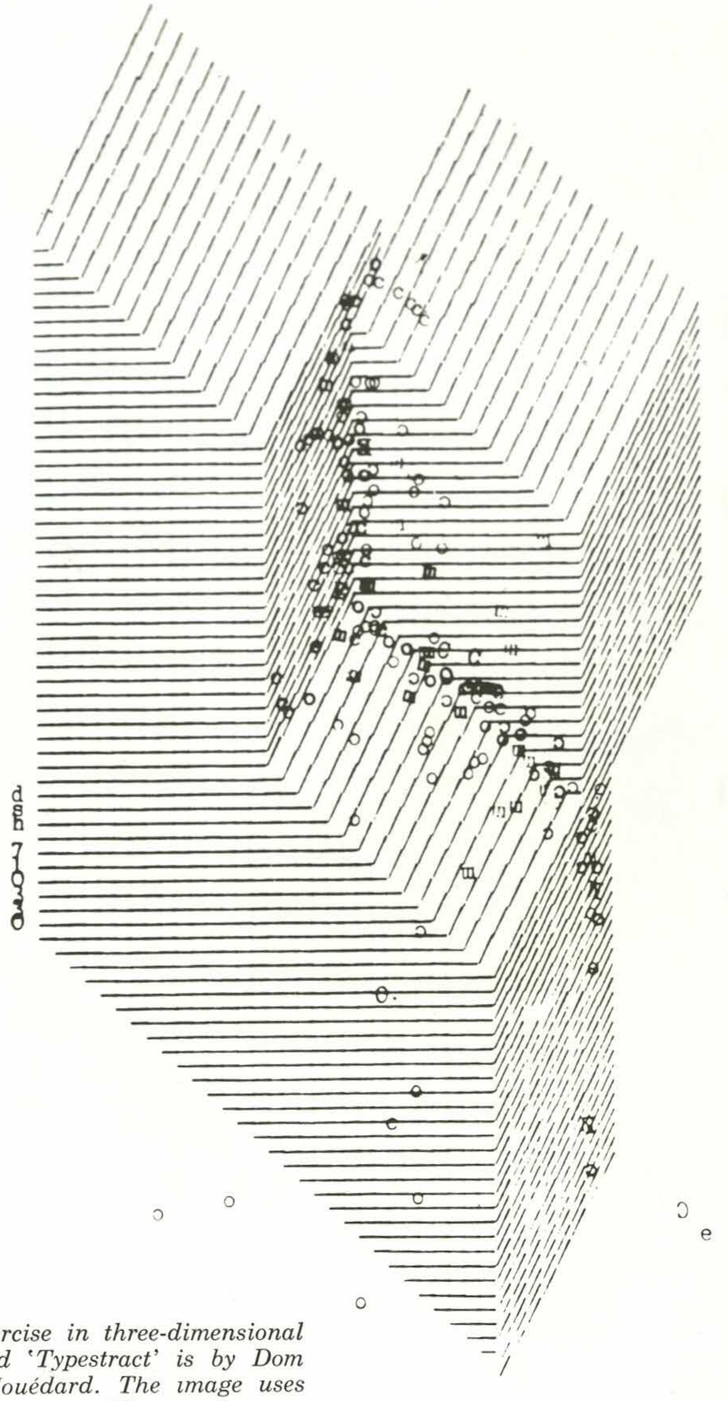
'Queen Elizabeth' by Dennis Collins was translated from a newspaper.

monochrome typewriter art, while multi-coloured techniques are treated in the next chapter.

Designs

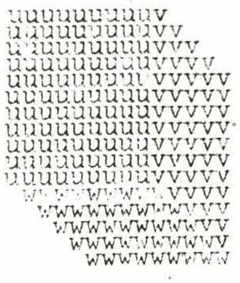
Each artist has his or her own method of evolving a typewriter design. But even an abstract design needs careful construction and planning if it is to be successful. The simplest method is to draw the design on to graph paper. Each small square represents a typed character. After this it is up to the artist to experiment with different characters to obtain the desired effect.



1. *This exercise in three-dimensional effects called 'Typestract' is by Dom Sylvestor Houédard. The image uses oblique and horizontal lines.*

Second Aeon Press

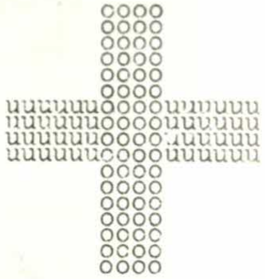
Dimensional form. Construction of three-dimensional form is quite easy. The simplest method is to use two signs—the oblique and horizontal strokes (fig.1).



2. *Three-dimensional effects.*

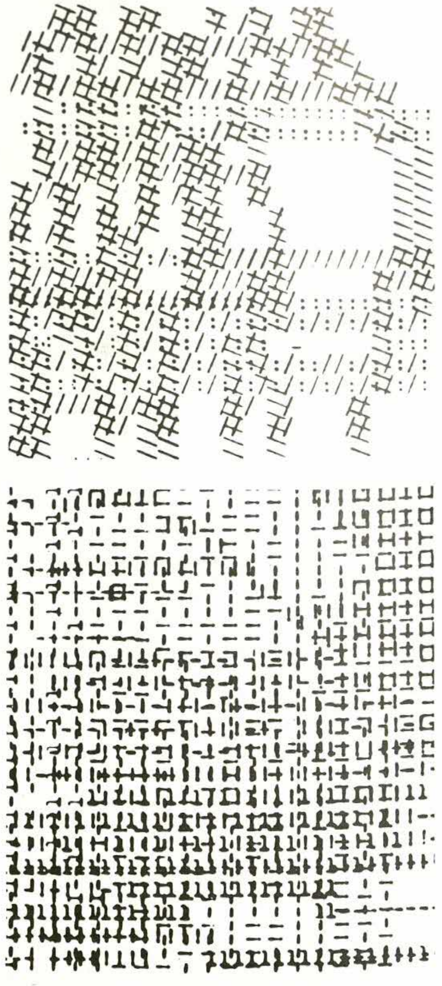
Another way to create the illusion of depth is by using letters of varying tone (fig.2). Here a cube shape is produced by using three consecutive letters—u, v, w. Any three letters can be used though the effectiveness of different shading on each facet would be diminished by choosing letters whose tonal value and design were too similar, such as b, p, and q. Cubes produced in this way have an optical effect in that you are not sure whether you are looking diagonally down into a box whose top and near sides have been removed, or are looking diagonally up at one whose far sides you cannot see.

A third way to produce three-dimensionality is by suggesting that one part of the design is going behind another as in fig.3. Although this impression can be conveyed in black and white it is enormously enhanced in colour.

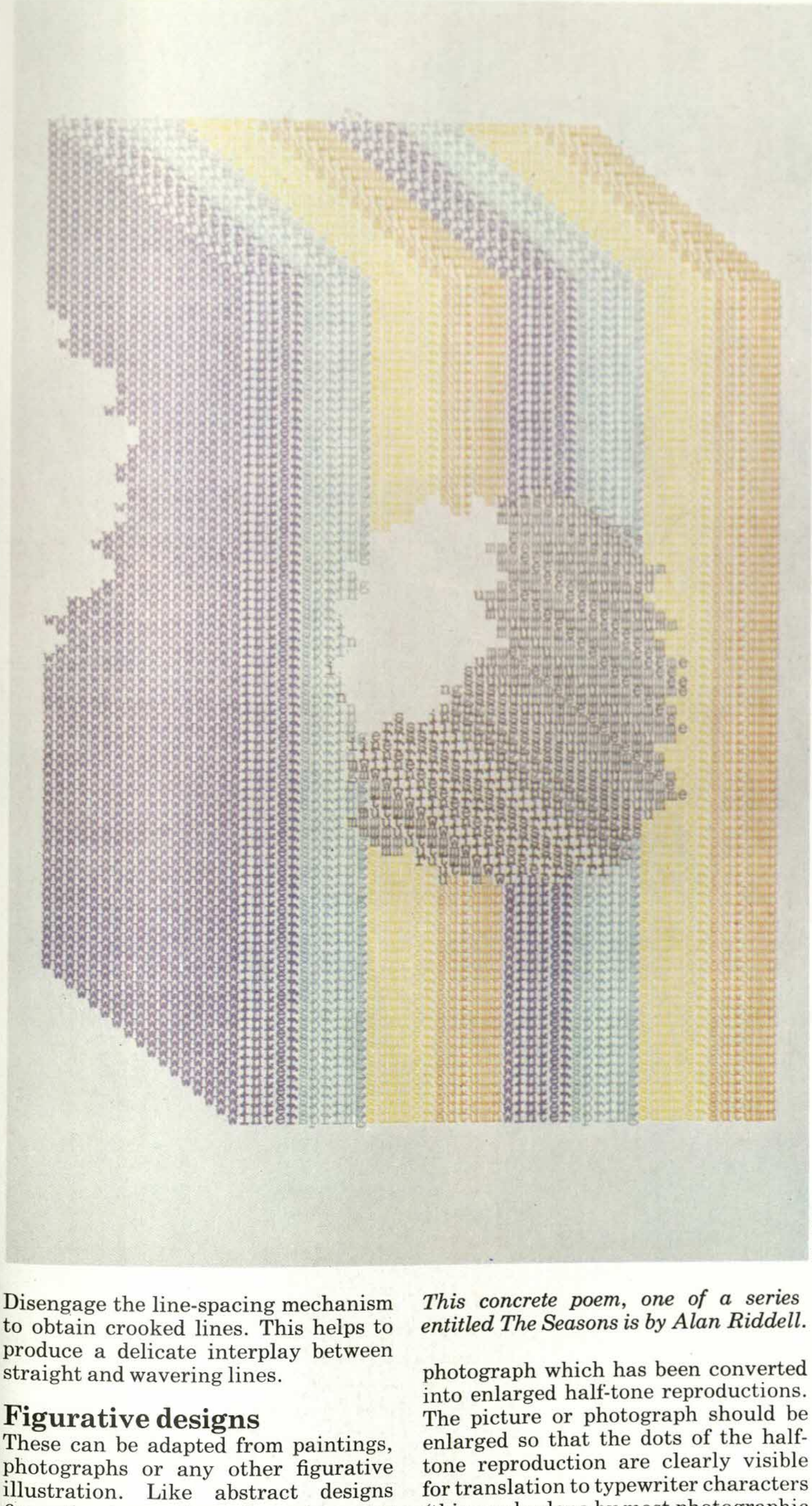


3. *Illusion of overlapping a design.*

Another technique worth imitating is to insert a sheet of paper into the typewriter two or more times, each time at right angles to the last. This produces elaborate patterns or cross-hatching and texture (fig.4).



4. *Two examples of cross-hatching.*



This concrete poem, one of a series entitled The Seasons is by Alan Riddell.

Paul Kemp

Disengage the line-spacing mechanism to obtain crooked lines. This helps to produce a delicate interplay between straight and wavering lines.

Figurative designs

These can be adapted from paintings, photographs or any other figurative illustration. Like abstract designs figurative typewriter art requires very intricate planning. This chapter covers translation from a photograph, a later chapter deals with other forms.

You will need:

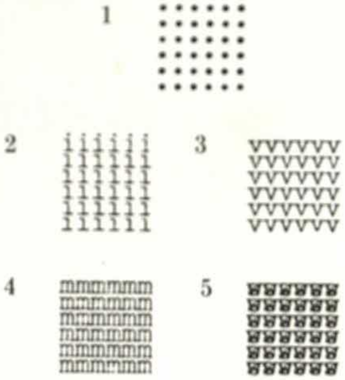
A detail from a photographic negative or a small section of a newspaper photograph which has been converted into enlarged half-tone reproductions. The picture or photograph should be enlarged so that the dots of the half-tone reproduction are clearly visible for translation to typewriter characters (this can be done by most photographic laboratories: see Printing chapter 20, page 2288).

Tracing paper.

Graph paper.

Plain paper.

Typewriter.



5. *A tonal scale to represent different dots on a half-tone reproduction; 5 is* **s** *typed over* **w**.

Black typewriter ribbon and sharp pencil.

☐ Before embarking on the actual picture, make a scale—from light to dark—which relates the tones of the typewriter's letters and signs to the dots on the half-tone reproduction of the photograph (fig.5).

1 relates to light areas working up to five for the black. The figures in between relate to tones of grey.

☐ Place a sheet of tracing paper over the half-tone reproduction of the photograph and trace on the outline of the image.

☐ Next, simplify the photograph's shaded areas into five basic tones and then mark these areas on the tracing paper with the appropriate numbers from 1 to 5 according to their darkness. Classifying the grey tones of the dots is left to your choice.

☐ Place the tracing paper over a sheet of graph paper and transfer the numbers on to the small squares.

☐ Using this as a guide, type the image directly on to the plain paper following the code numbers given in each square.

☐ Continue typing until the picture is complete. It is advisable to practise on a simple scale before devising a more subtle scale which could have twenty or more variations in tone to match the subtly graded variations of the half-tone dots.

Concrete poems

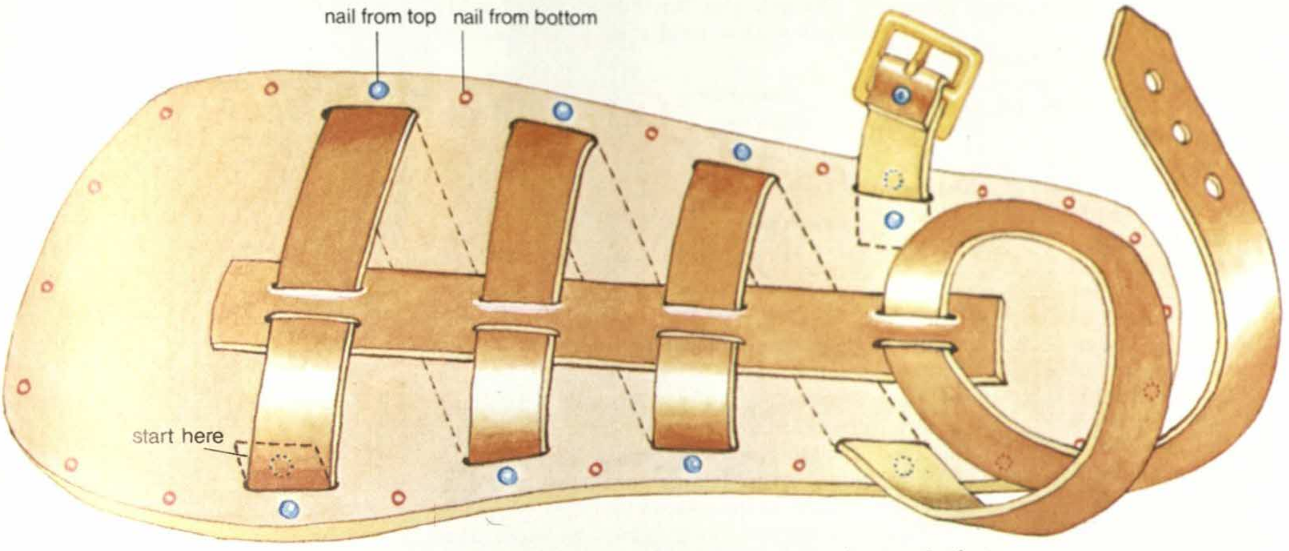
Not surprisingly some typewriter pictures often incorporate words in an intelligible way in their designs. Most of these works are done in black and white. They are called concrete or typewriter poems; the word concrete is used to express the fact that these poems have a visual or 'concrete' reality on the page, which often reinforces the meaning of the words. While in traditional poetry good typography can enhance the appearance of a poem it is irrelevant to the poem's meaning.

Leather 16

How to make leather sandals

Making shoes from leather is a very lengthy procedure, but it is quite easy to make a pair of leather sandals since they do not involve all the complicated techniques of shoemaking. However, they will probably stand up to everyday wear and tear better than any sandals you may find in the shops.

These hand made leather sandals are great for wearing on the beach. Designed by Chris Powell.



1a. *The 'Roman' sandal has a central strap running up the foot.*

The basic construction of the sandals illustrated involves wrapping one length of strap round the foot several times, slotting it in and out of the sole. This means that the straps can easily be adjusted to an exact fit.

The soles are made of soling leather which is very thick vegetable-tanned russet hide. The thickness of this leather is measured in irons. For the sandals illustrated here a 12 iron—6mm ($\frac{1}{4}$") thick—leather is used.

Each sandal has a double sole—two pieces of leather stuck together grain side outermost. The upper sole has holes cut in it through which the strap is slotted. The lower sole is then stuck underneath.

The straps are of thinner vegetable-tanned russet cow-hide which are rubbed with neat's-foot oil to make them more supple. The straps on the sandals in the photograph are left plain, but they could be decorated with tooling or dyed with leather dyes (see Leather chapter 9, page 2119).

The style. There are many ways in which the strap could be wrapped round the foot. Only two variations are shown here but you need not limit yourself to one of these. Try wrapping a length of tape round your foot and see if you can invent a style you prefer.

The sandals

The two styles shown here are 'Roman', a sturdy sandal with a central strap (fig.1a) in the middle, and 'Jamaica'—a lighter type (fig.1b). Both are made in the same manner except for the way in which the strap is threaded. Materials are for an average adult foot.

You will need:

12 iron soling leather 50cm x 30cm (20"x 12").

3mm ($\frac{1}{8}$") thick vegetable-tanned russet cow-hide: 2cm ($\frac{3}{4}$") wide and about 2.4m ($2\frac{5}{8}$yd) long for the sturdy sandals; 1.3cm ($\frac{1}{2}$") wide and 2m ($2\frac{1}{4}$yd) long for the lighter type.

Petroleum jelly.

Impact adhesive such as Evo-stik.

60 shoemaker's hand tacks, about 1.3cm ($\frac{9}{16}$") long.

Hammer.

Two buckles with inside width equal to the width of strap used.

Sharp knife such as a Stanley knife.

Piece of stiff paper or card.

Two rivets and rivet punch.

Revolving punch.

Neat's-foot oil.

Steel rule.

Ballpoint pen.

Scissors.

Fine grade glasspaper.

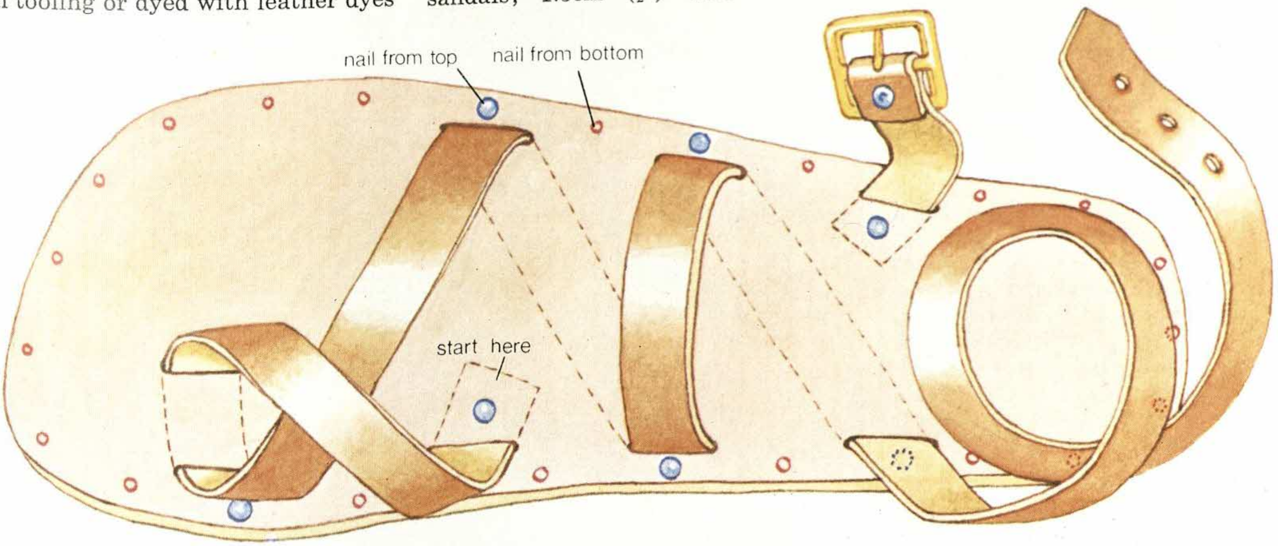
Soft pencil.

Neutral wax polish such as that made by Kiwi.

Tape measure.

☐ Following fig.1, wrap a tape measure round your foot to see how long to cut the leather strap.

☐ Cut the leather strap to the required



Coral Mula

1b. *Slot the straps for the 'Jamaica' style as shown here.*

length and also a short buckle piece of about 7.5cm (3″).

☐ If you are making the roman style, cut 2 central straps between 18cm (7″) and 20cm (8″) long with four 2.5cm (1″) slots in each (see fig.1).

☐ After cutting the straps, apply some neat's-foot oil to make the leather supple and more comfortable to wear.

Making the pattern. Use a piece of stiff paper or light card. If your feet are more or less the same size one pattern will be sufficient for both feet since it can be reversed to cut the second sole. However, if there is a great deal of difference between the left and right, it is advisable to make one pattern for each foot.

☐ Place your foot on the paper and lean on it quite heavily.

☐ Draw round your foot keeping the pen absolutely upright.

☐ Cut out the pattern keeping the scissors just outside the foot outline. As this will be the exact outline of the sole, leave a little extra round the edge and smooth out any bumps. You could even change the shape of the toe or square off the heel. At any rate, try and make a shape that is pleasing to look at and which suits your own foot shape.

Cutting the slots. The next step is to mark the location of the strap holes on the pattern. To find these, wrap the leather strap round your foot as it will be on the finished sandals.

☐ Place your foot on the pattern and mark in pencil where the straps will come through the sole.

☐ Cut slots on the marked points 6mm (¼″) from the edge and the same width as the straps.

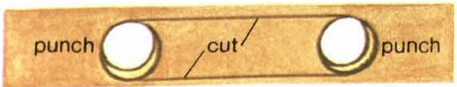
☐ The pattern is now ready to be transferred on to the leather, and the soles cut out.

☐ Place the soling leather on a flat surface, grain side up.

☐ Place the pattern on the leather and draw round. Mark a left and right shape, turn the pattern over and mark two more. On one right foot and one left foot mark the location of the strap holes in pencil. Cut out, making the under-soles slightly larger than the pencilled outline.

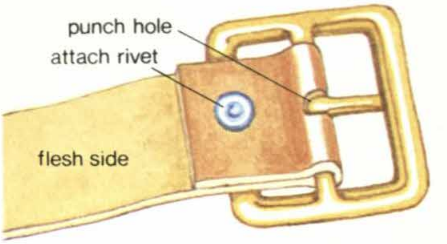
☐ When cutting this extremely thick leather, use a new blade and cut through the leather in stages. After the first cut, place the cut over the edge of a table and bend the leather so that the cut opens a bit. Then continue cutting through the leather.

☐ Make the slits in the upper sole using a revolving punch and a knife (fig.2).



2. *Cut slots for straps to go through.*

☐ Attach the buckles to the buckle straps with a rivet (fig.3). See Leather chapter 4, page 1710 for attaching rivets.



3. *Attach buckle and rivet.*

☐ Slot the other end of the buckle piece through the appropriate opening (see fig.1) and glue in place.

☐ Slot the long strap through the starting slot (see fig.1), glue the end to the underside of the sole, and start threading. If you are making the roman style, thread through the central strap as well.

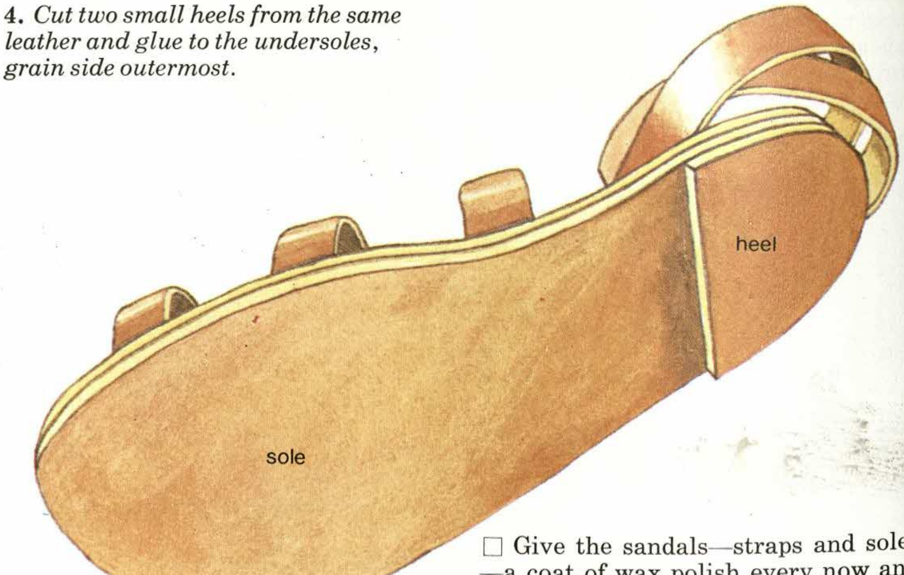
Sticking the soles. The second sole is now stuck to the underside of the upper sole. In order that the straps will not be glued in place and will slide through for adjusting, spread a little petroleum jelly on them to protect them from the glue.

☐ Apply glue to the flesh side of the lower soles and to the flesh side of the upper sole (avoiding the straps).

☐ Place the two soles together, flesh sides facing and press down firmly.

The heel. Using the last 6.5cm (2½″) of the shoe pattern, cut out two heels from the soling leather and glue one to the underside of each sandal, aligning the edges (fig.4).

4. *Cut two small heels from the same leather and glue to the undersoles, grain side outermost.*

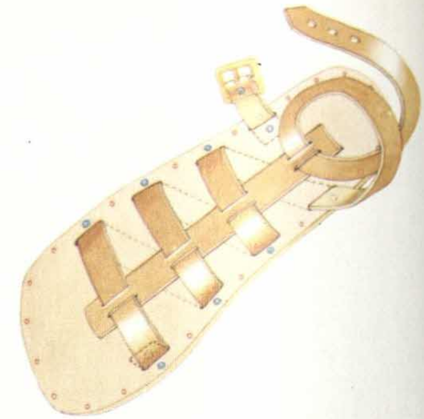


The soles and heels are now secured together with shoemaker's tacks.

☐ Place the sandals on a hard surface, the right way up.

☐ Following fig.1, hammer in tacks where indicated, making sure to secure the start of the long strap and the buckle piece, but do not secure the strap anywhere else, or it will not slide for final adjustment.

☐ Trim off any excess leather from the lower sole which was cut slightly larger than the upper sole.



Coral Mula

5. *Nails are at 1.3cm (½″) intervals.*

☐ Turn the sandal over and place on a hard surface. Hammer nails all round edge of the sandal (fig.5), avoiding straps. The points of the nails will flatten out on the hard surface.

☐ Sand down the edges of the sandals with fine grade glasspaper and then apply a coat of neutral wax polish.

☐ To adjust the straps, put the sandal on and tighten each section of strap from the start to the end of the strap.

☐ Using the revolving punch, punch holes for the buckle tongue.

☐ Give the sandals—straps and soles —a coat of wax polish every now and then to prevent them from drying out and to keep them supple.

Polish the sandals regularly to prevent them drying out.

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Open-work by machine

Yarn — embroidery 22

Drawn thread and cut work are among the more unusual forms of machine embroidery. Although they can be put to the same uses as their hand-stitched counterparts, they are not just mechanically worked copies. Instead they have a distinctive form of their own which cannot be achieved with hand embroidery.

Both machine-stitched drawn thread and cut work are done 'freely'—that is, with the foot removed from the machine, with the feed dog lowered or covered and with the fabric mounted in a frame (Embroidery chapter 17, page 2022).

Eyelets are a third form of open machine embroidery. These are also worked with the machine set for free embroidery but with the addition of a special plate which forms the eyelet. Eyelets are simple to do and extremely effective used on their own or in combination with other stitching effects.

General points

To allow enough room for working when the fabric is mounted in a frame, you should leave about 10cm (4″) between the edge of the area to be embroidered and the edge of the fabric. If you wish your design to be near the edge or seamline when finished, allow the extra amount when cutting out and trim it away when the embroidery is complete.

When calculating your fabric requirements, always allow a little extra for practising before you begin the embroidery on the actual article. For all types of open-work machine embroidery you should probably allow two sections of fabric each larger than your frame.

Garments

Machine drawn thread and cut work are both suitable for decorating garments.

As a general rule the embroidery should be done after cutting out the fabric but before making up. An exception to this might be where you are working a border which crosses the seamline, as shown on the skirt in the photograph.

Here the seam was worked before the embroidery so that the threads could be drawn completely between the raw edges. If the embroidery had been worked before the seam was stitched the seam turnings would have shown through.

When planning the embroidery for a garment, choose a simple pattern which will cause no fitting problems and which has no darts in places which might interfere with your design. If you do have to alter the pattern to make it fit, do this before starting the embroidery.

Ready-made garments. It is not impossible to work this kind of machine embroidery on ready-made garments although you may find it awkward and your designs will be restricted to areas which can be framed easily. In addition, unless you originally made the garment yourself and saved any offcuts, you will not have a spare piece on which to practise.

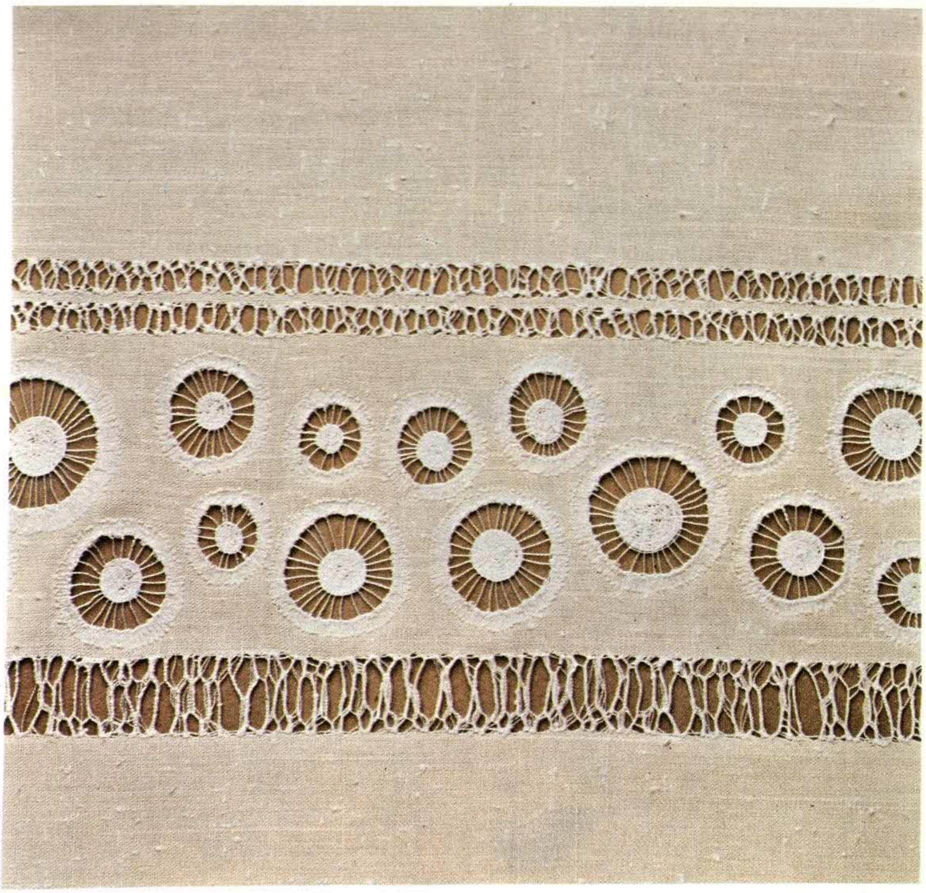
Drawn thread work

Like its hand-worked counterpart, drawn thread work is done on the threads remaining in a band of fabric where the crosswise threads have been pulled out. The threads in the band are grouped by stitching freely with satin stitch. This gives a heavier effect than hand-stitched drawn thread work and looks most attractive—and is easiest to do—if the grouping is done at random.

Designs can be planned in a similar way to hand-stitched drawn thread work, although the finished effect will be quite different from the ordered symmetry of traditional hand designs. Because machine drawn thread work is fairly quick and cut edges can be strengthened easily, interesting designs can be made by pulling threads of different lengths and distances apart in both directions, so that the area of stitching is controlled by an irregular outer shape.

Materials. Choose a fabric with threads which are easy to pull out, such as a linen or heavy cotton. Either 30 or 50 machine embroidery cotton can be used for the stitchery.

☐ Draw out the fabric threads to form the required design but do not cut them off.



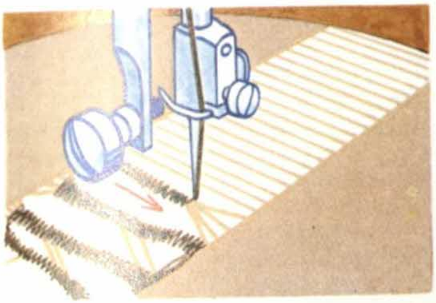
Paul Kemp

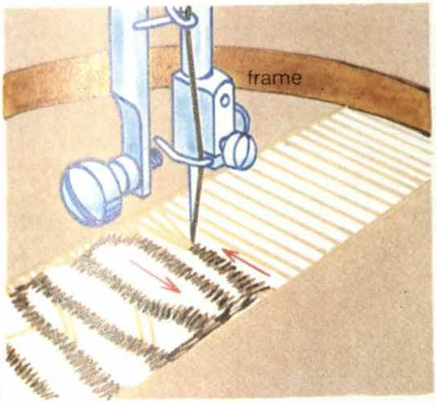
Detail of the skirt shown opposite. Drawn thread embroidery groups the fabric threads in the straight bands. The circles are done in cut work.

☐ Mount the fabric in the frame and set your machine to do a free wide satin stitch with balanced tensions on the top and bobbin threads.

☐ Work a close satin stitch over the loose ends at the edges of the design to secure them and then trim off the loose threads. Turn the frame at right angles in order to stitch over the fabric threads in the drawn area.

☐ Stitch slowly over the fabric threads, moving the frame smoothly so that the satin stitch pulls the threads together (fig.1). Then move the frame slightly sideways and work backwards to pull the next group of threads together (fig.2). You can cover the fabric threads entirely with stitching or you could leave some parts of them uncovered for a more delicate effect.


1. *Grouping threads with satin stitch.*



2. *Working backwards over next threads.*

Coral Mula

Cut work

This could be described as a decorative form of machine darning.

Designs consist of a series of cut-out shapes into which may be worked a delicate web-like pattern or more solid stitchery which contrasts with the background.

If the technique is to be used for dress embroidery, large cut-out shapes should be well filled with stitchery. Small spaces—up to about 2cm ($\frac{3}{8}''$)—can be left more open provided there is no danger of threads being pulled by such things as buckles, handbags or bracelets.

Machine drawn thread and cut work make a beautiful border in this skirt designed by Joy Clucas.

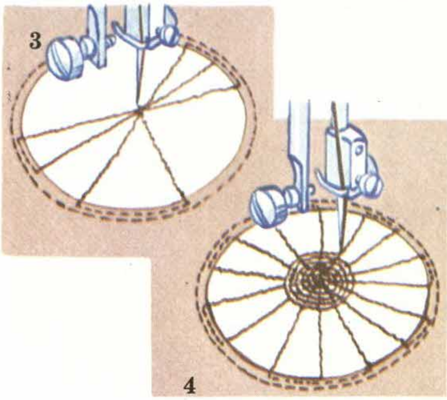
Sandra Lousada

Materials. Choose fabrics which are closely woven and unlikely to fray, such as linen, sailcloth, cotton lawn and organdie.
Use a thread which will stand up to wear and washing, such as a 30 machine cotton, mercerized sewing cotton and, if you wish to incorporate some cable stitch, pearl cotton.

☐ Frame the work and outline the shapes with three or four lines of free running stitch which either lie on top of each other or side by side. This prevents the edges of the shape from stretching.

☐ Remove the fabric from the frame and cut out the shapes close to the running stitch.

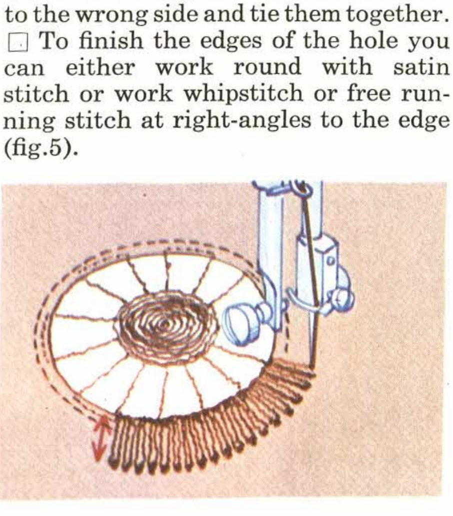
☐ Frame the fabric again and work a few stitches round the edge to secure the threads. Then machine backwards and forwards across the space, carrying the stitching round the edge to the desired position of the next line (fig.3).



3. *Stitching across the cut shape.*
4. *Machining over threads to form web.*

These threads over the space can then be machined across to build up a web pattern (fig.4). If you wish to change colour during the design, either secure the ends of the threads in the edge by close stitching or take the ends to the wrong side and tie them together.

☐ To finish the edges of the hole you can either work round with satin stitch or work whipstitch or free running stitch at right-angles to the edge (fig.5).



Coral Mula

5. *Working running stitch to finish.*

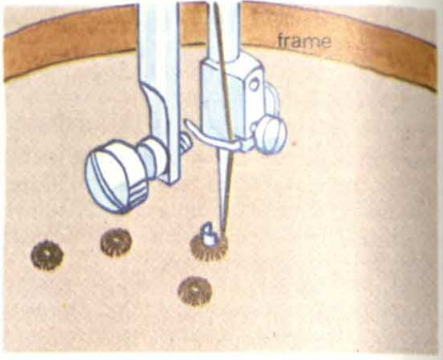
Eyelets

The special plates which can be fitted to the machine to form eyelets are extras (not supplied as standard equipment) and are usually made in two or three sizes. The plates have a small raised section in the centre which is slotted into a hole cut in the fabric. When the fabric is rotated round the raised section the stitches cover the edges of the hole accurately and evenly. For this reason the frame in which the fabric is mounted must be small enough to rotate completely round the needle without touching the upright part of the machine, and the eyelets should be positioned within the frame so that they do not hamper this movement.

Materials. Most fabrics can be used for eyelets. Use 50 machine embroidery thread for the stitching. An interesting effect can be made by using different colours for the top and bobbin threads.

☐ Pierce a hole with an awl in the required position on the fabric and mount the fabric in the frame.

☐ Fit the eyelet plate on the machine. Prepare your machine for free embroidery with a medium-size satin stitch. If you are using different colours in the bobbin and on top, tighten the upper tension so that the bobbin colour will show round the edges of the stitches. Loosen the lower tension too if necessary.



6. *Working satin stitch for eyelets.*

☐ Place the work in the machine so that the pierced hole fits over the raised section on the eyelet plate.

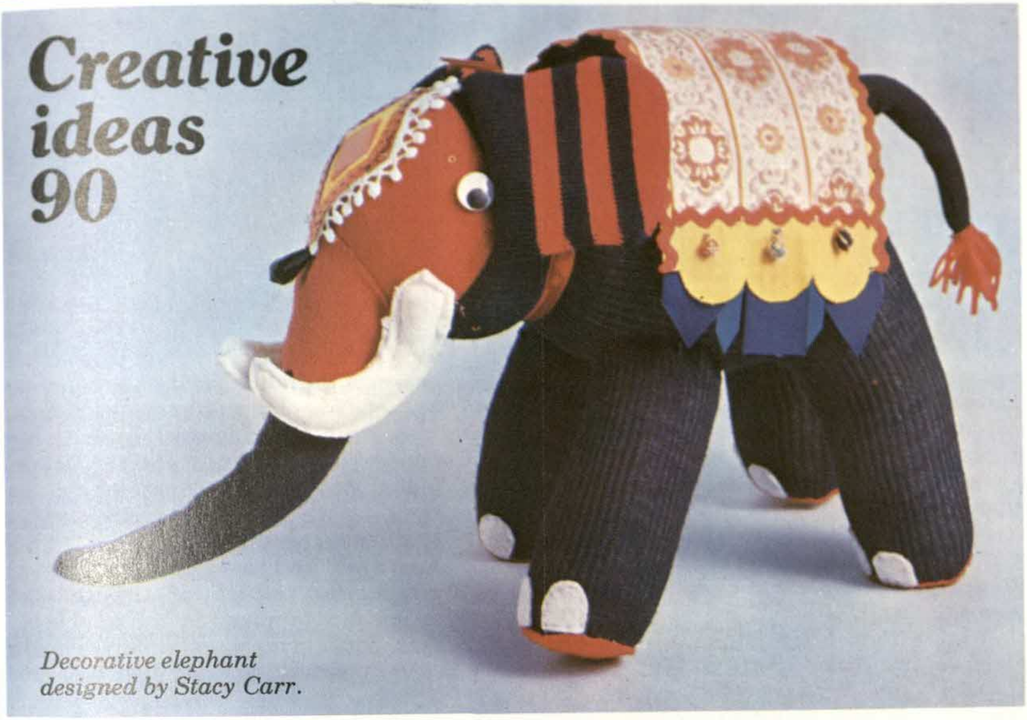
☐ Position the needle to the left and draw the thread up through the hole. Holding both thread ends to start, run the machine fast revolving the frame steadily (fig.6). You will get a better effect by quickly revolving the frame twice rather than slowly revolving it once.

☐ When the eyelet is complete, tie the thread ends together on the wrong side of the fabric.

Peter Kibbles

Eyelets (in the centre) are combined with running stitch motifs on this organdie mat.

Creative ideas 90



Decorative elephant designed by Stacy Carr.

Melvin Grey

Sock elephant

Here is a jovial toy created from socks with contrasting toes and heels.

You will need:

Pair of adult's long socks.
Small quantity of soft stuffing such as kapok.
White and red felt.
Cardboard.
About 46cm (18") of 6mm (¼") velvet ribbon.
18cm (7") of pipe cleaner.
Two toy's eyes (optional).
Needle, thread, beads, sequins, ric-rac braid, ribbon, scissors.

To make the elephant's body and rear legs, start by turning one sock inside out. Cut across leg so base of heel to leg top measures 20cm (8"). With small stitches, sew a 3mm (⅛") seam through both thicknesses of sock, running down each side of centre back—start 8cm (3") from base of heel and continue each seam across top (fig.1). Cut sock between centre seams, continuing for 2.5cm (1") after end of stitching to make opening for stuffing.

To make elephant's front legs first cut a 12cm (5") length from double thickness of leg of second sock (fig.2). Turn length wrong side out. Stitch and cut into two as for rear legs. Turn front legs right side out.

Cut four circles from cardboard for foot pads (each with a diameter of about 4cm (1¾") according to width of legs). Cut four matching felt circles. Insert a cardboard foot pad down inside each leg. Sew felt circles on undersides for soles.

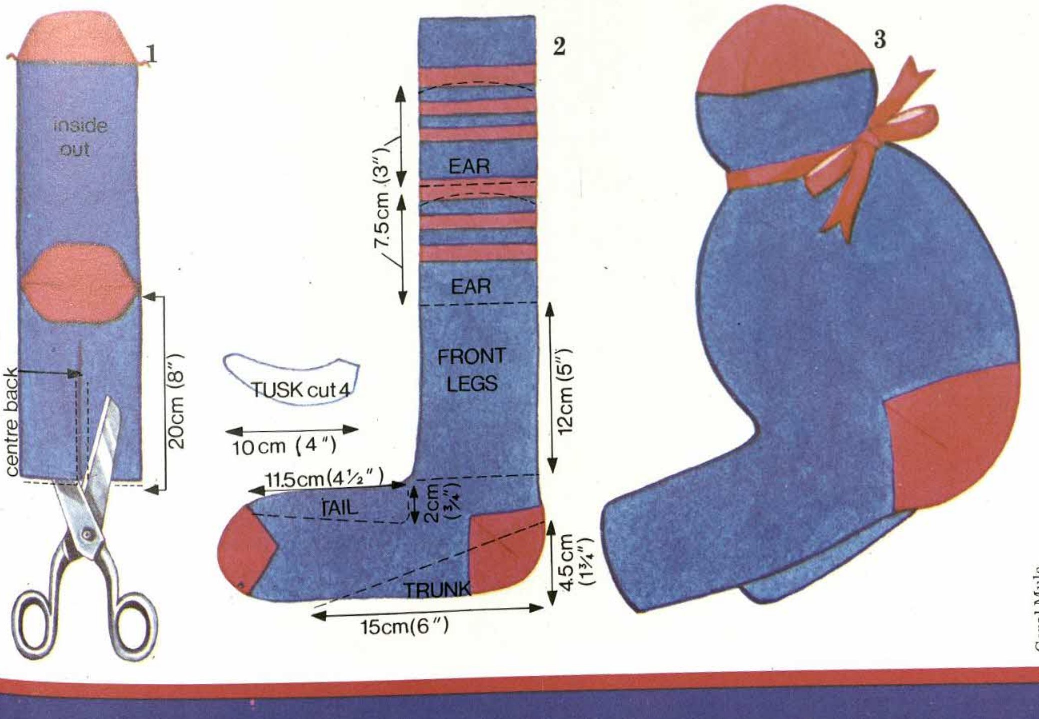
Stuff body and legs firmly through opening.

Tie velvet ribbon around body to make a neck (fig.3). Stitch front legs on to body. Sew up rear opening.

From second sock cut out a trunk, two ears and a tail (see fig.2). Stitch seams, stuff and sew each piece to elephant's body.

Cut out four tusk shapes from white felt (see fig.2). Sew two felt shapes together for each tusk, enclosing 9cm (3½") of pipe cleaner in each. Attach tusks each side of elephant's trunk.

Attach a length of red, fringed felt to tip of tail and make a colourful coat from braids and ribbon. Add beads, sequins and white felt for toe-nails to decorate elephant. Attach toy's eyes or embroider eyes if preferred.



1, 2, 3. *Stitching, cutting and assembling the sock elephant.*

Coral Mula

Casting in concrete

Most garden ornaments, from decorative walls and balustrades to urns and gnomes, are cast in concrete. Concrete casting involves the use of moulds and the basic technique is not so very different from that employed to cast a doll's head in clay (see Clay chapter 47, page 2162).

The mould. Clay chapters 13, page 538 and 51, page 2270 describe how to make plaster of Paris moulds, and these are useful for making relatively small items in concrete. But large or complex plaster moulds are heavy to handle and all too easy to break. The alternatives are metal or glass fibre moulds.

For straight-sided figures, such as the blocks for a screen wall, a metal mould is generally the most practical. Simple ones can be made, but more complex ones should be bought from a DIY shop or builder's merchant or hired. Moulds for screen wall blocks are available in various patterns. They are expensive but, with practice, it is possible to turn out up to a hundred screen wall blocks a day. This makes it economic if you want to build a large section of wall.

Glass fibre moulds are probably the easiest to use, particularly for casting small animals or balustrades. They can be bought from a mould supplier or, if you prefer, most mould suppliers will undertake to make up a glass fibre mould to your own design. This tends to be expensive and is really only economic if you intend to take repeated castings.

The materials. The main requirements are sand, cement and water. You need a fine, sharp sand which you can buy, together with portland cement, from a builder's merchant.

If the object you plan to cast is more than 5cm (2¼″) wide, it will need internal support to prevent it from cracking when it is turned out. This support can take the form of a metal rod, cut to length and pushed down the centre of the mould before the concrete has set. You can use quarter steel rods, from an engineering works, or you can improvise, using old stair rods or, indeed, any piece of strong metal of the right length which you may find in attic, cellar or junk shop.

Textures and colours. To a great extent the texture of the finished article is determined by the sand used. Fine sand gives a relatively smooth surface—coarse grained sand will give a rougher texture which is interesting for large surfaces but unsuitable for delicate or detailed work because fine detail is liable to break off.

Colour is determined partly by the sand, in that a strongly yellow sand with a white cement will obviously give a yellow finish, but also by the cement itself, which is available in various shades. It is also possible to buy a colouring agent, such as Cementone, in fairly small quantities.

Experimenting with colour and texture, as well as with design, can give your garden ornaments a uniquely personal quality.

Screen wall

These are popular not only as garden surrounds but also to screen a patio or lawn. Before you begin, check whether or not you need planning permission. When cast, the blocks should be allowed to stand for a week to dry out fully. You should either work in an area where the blocks can be left in a sheltered situation for that length of time—perhaps a garage floor—or, if you prefer to work outside, work on a board so that the blocks can be easily moved to a suitable place.

You will need:

Mould, which consists of an outer case, a 'spare' and a frame with prongs.

3 parts of sharp sand.

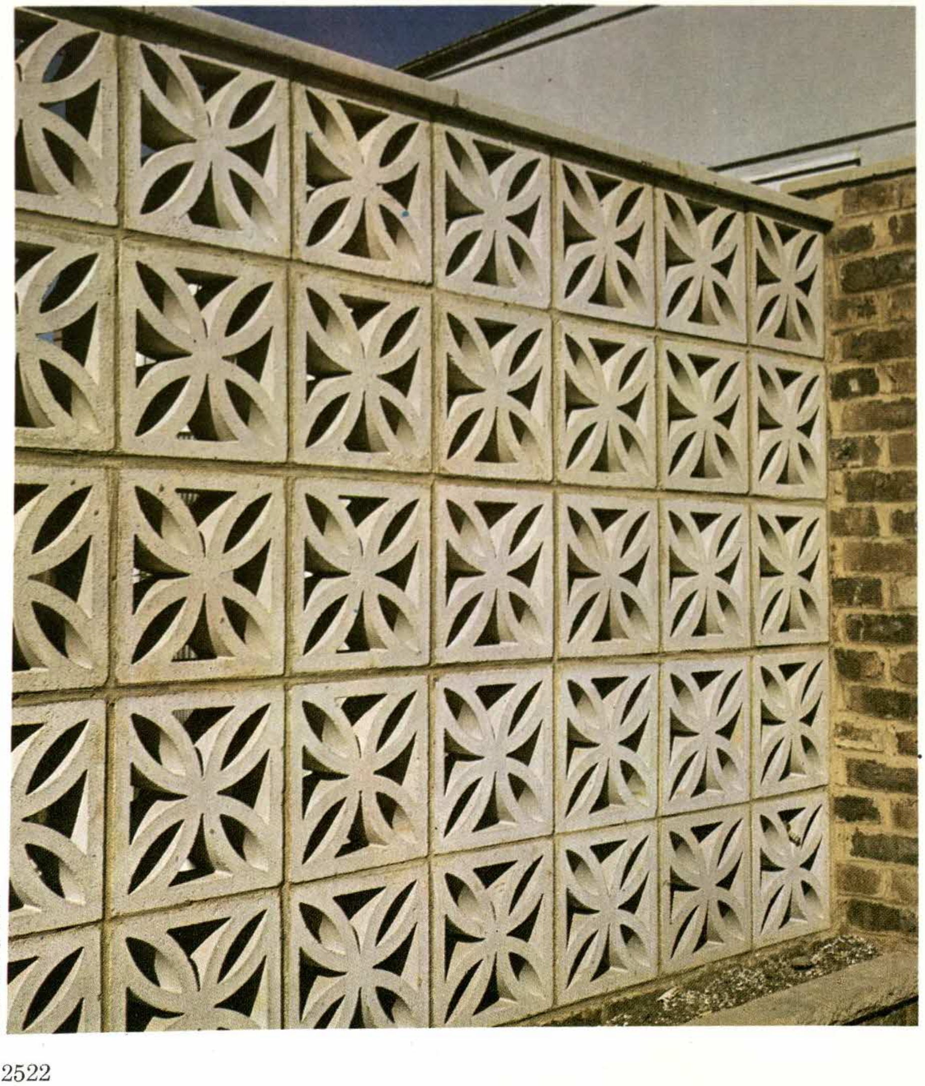
1 part of cement.

Spade.

Flat, dry area to mix cement and turn out moulds.

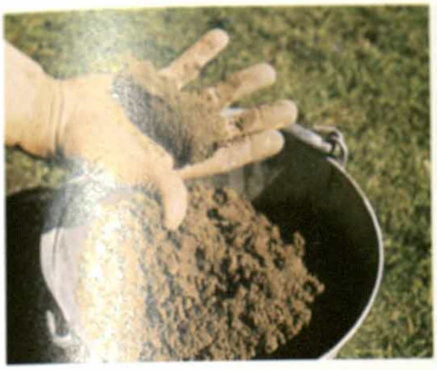
Watering can of water.

Bucket and trowel.



Nelson Hargreaves

This home-made screen wall lends privacy to a patio area and shelters it from the prevailing wind.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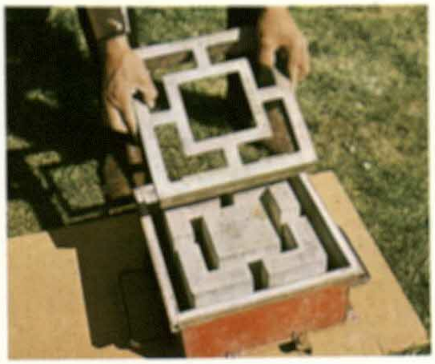
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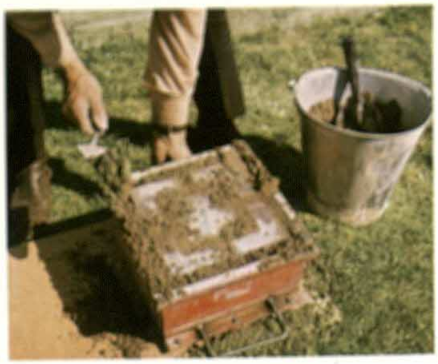
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The blocks. Use the spade to mix the cement and sand with enough water to give a semi-dry consistency.

Until you have learned to judge quantities, add the water very gradually and keep testing the consistency. To do this, pick up a handful of the mix. Clench your hand. When you open your hand the cement should hold together (fig.1).

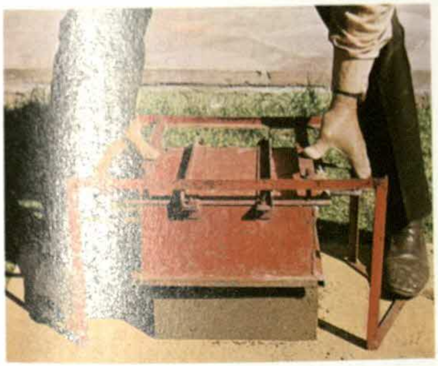
☐ Scoop some cement into a bucket from which you can fill the mould.

Because you are using a semi-dry medium the mould does not need to be greased.

☐ Prepare the mould by fitting the 'spare' into place (fig.2). Make sure that you locate the 'key notches' accurately so that the spare will drop evenly to the bottom (see Clay chapter 51, page 2272). If it goes in crookedly, or sticks half-way down, tip it out and begin again.

☐ Fill the mould with the semi-dry mix (fig.3).

☐ Take hold of the handle of the mould and rock it to help the mix to settle.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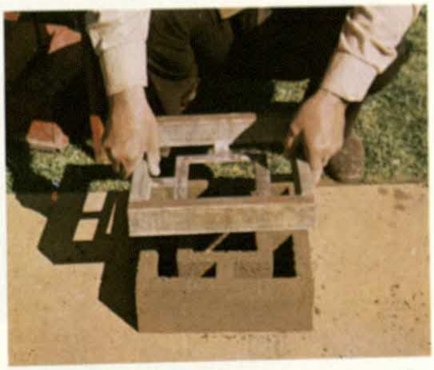
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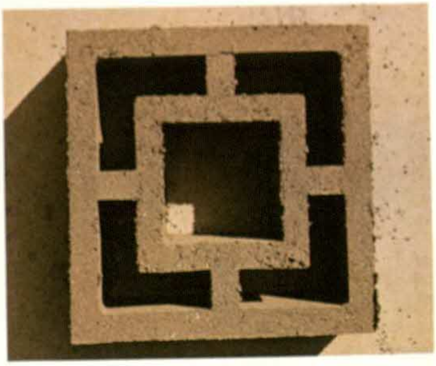
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☐ When the mould is packed full, turn it upside down on to a flat, dry area.

☐ Stand the frame over the mould so that the prongs on the frame fit into the holes in the mould.

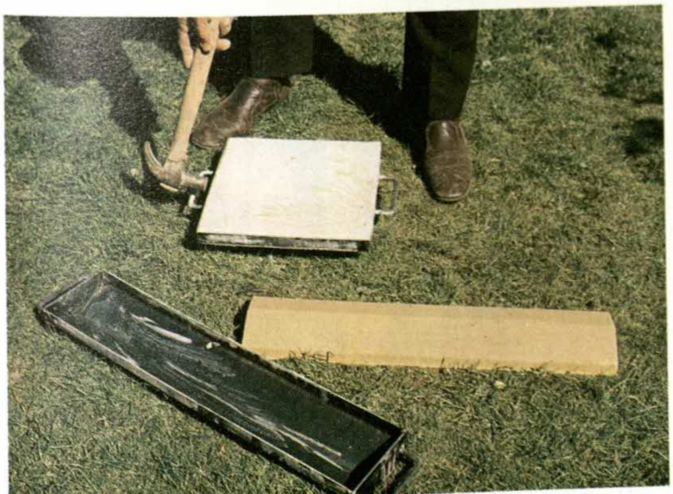
☐ Stand on the sides of the frame, to anchor it, and lift up the mould by its handles (fig.4). The prongs on the frame will be pushed down into the mould, and will make contact with the spare which will force the moulded block out.

☐ Remove the 'spare' (fig.5).

☐ The block is now complete (fig.6) and the mould ready for immediate re-use.

☐ Allow the blocks to dry out for about a week.

☐ On the second or third day, sprinkle each block with a little water from a watering can for a better finish.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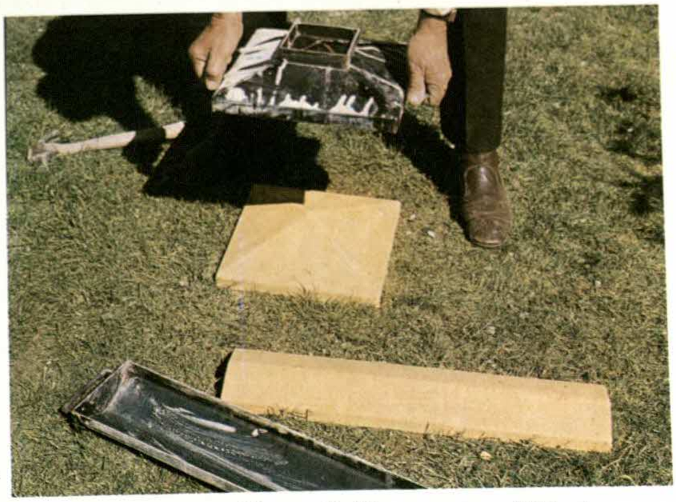
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The coping. The coping and the pillar tops are made in simpler moulds but by a very similar method. The coping finishes off the top of the wall.

☐ Pack the mould tightly, turn it upside down and tap it all round with a hammer (fig.7).

☐ Turn out the finished stone (fig.8).

The wall. The screen wall blocks come in various designs, and whichever you choose the finished wall is an attractive addition to a garden.

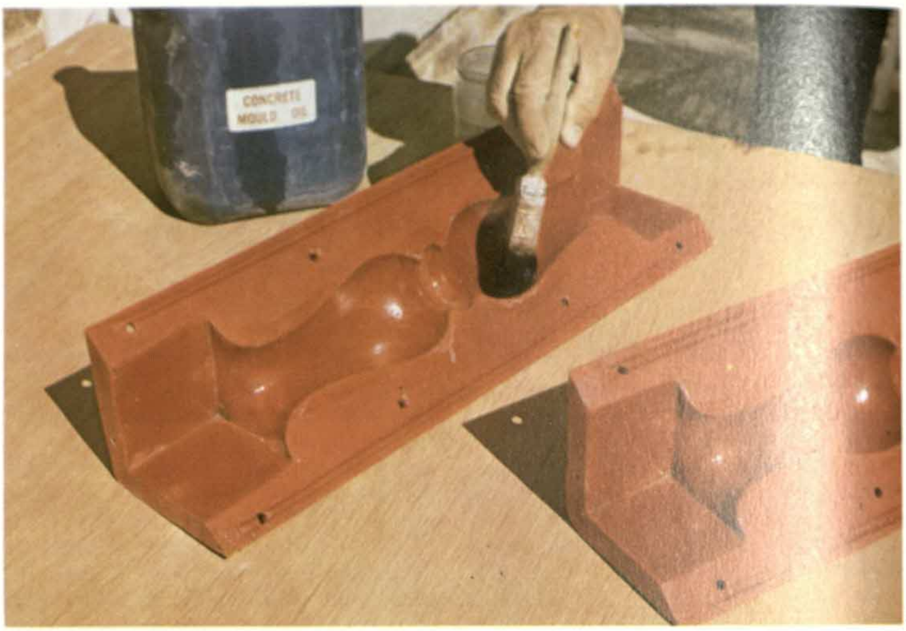
Balustrades

Two-piece glass fibre moulds can be used with a semi-dry or wet cement mix. If you are using a wet mix, the inside of the mould must be greased before use. You can buy special concrete mould oil, but a mixture of lard and paraffin oil, stirred together to give a smooth spreading consistency is just as effective.

You will need:

A mould.
Three parts of sharp sand to 1 part of portland cement mixed with water to a pouring consistency.
Steel support rods.
Bucket.
Large paintbrush.
Trowel and fettling knife.
Jar into which to decant mould oil.
A firm flat surface to work on.

☐ Paint the inside of the mould with the mould oil or the lard and paraffin mix (fig.9).



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☐ Screw the two parts of the mould together with the screws and wing nuts which are provided with it.

☐ Stand the mould on a firm, flat surface. Remember that the mould is open ended and so this surface forms the base of the moulded article and will get plaster or cement on it.

☐ Fill the mould (fig.10).

☐ Push a metal rod down into the mix and lift it up and down a few times, tapping the sides of the mould with the handle of the trowel (fig.11). This will cause any air bubbles to rise to the surface and burst.

☐ Let the rod slide down to the base of the mould and leave it there.

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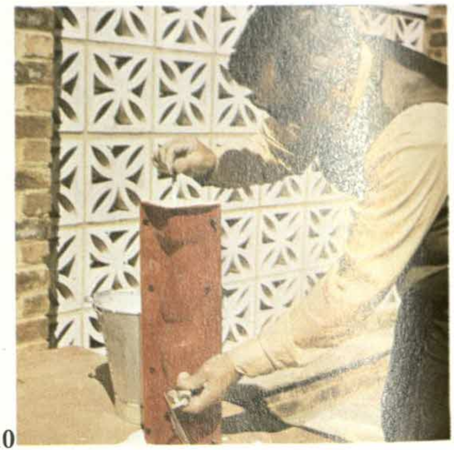

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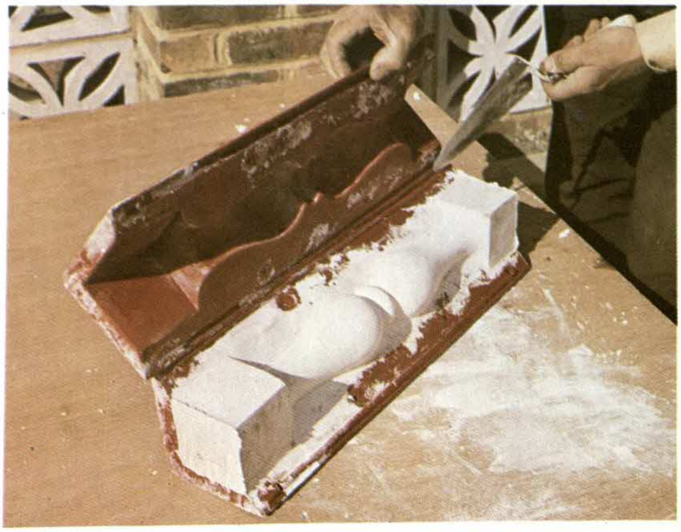

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13

☐ The concrete should have set within about half an hour.

☐ Undo the wing nuts on the mould.

☐ Ease the trowel into the joint and open the mould (fig.12).

You should be able to lift the balustrade clear of the mould quite easily, but if you have any difficulty use the point of the trowel very gently to prise it clear.

☐ Virtually any moulded article will need to be fettled.

☐ Use the fettling knife to remove any surplus pieces and to smooth the seams (fig.13).

Nelson Hargreaves

Each member of the concrete population of this garden was cast in a glass fibre mould. Any one would make an appealing addition to a child's garden.

Concrete creatures

Exactly the same technique can be used to produce all kinds of garden statues—frogs, rabbits, squirrels and gnomes. They can all be made from bought glass fibre moulds, and all should contain support rods. A more exciting alternative is to make a clay model of the creature you want to reproduce, and get a glass fibre mould made up to your own design.

Urns and dishes

Concrete urns or dishes, in which flowers or even small shrubs can be planted, are made in much the same way as the screen wall blocks. The problem is that the moulds, which can be bought very expensively, or hired, are quite complex piece moulds, designed with a core which gives the hollow centre to the finished article. As on most moulds, there are key notches which show how the pieces should be fitted together. When the mould has been fitted together correctly, and the concrete mix poured in and allowed to set, it is then necessary to turn the entire mould upside down in order to dismantle it, leaving the cast article standing free. Therefore this is not a project to be undertaken unless you have strong arms or willing helpers.

Peter Summersgill

A concrete dish brimming with flowers brings elegance and warmth to an otherwise bleak patio corner.

How to work the basic stitches

Yarn — bobbin lace 2

A hint of lace adds a romantic and feminine touch to any outfit.

Jerry Tubby

In Bobbin lace chapter 1, page 2506, an introduction is given to the materials required for bobbin lace. In this chapter, instructions are given for working the two basic stitches—cloth stitch and half stitch.

A length of lace transforms this simple petticoat into something special.

Cloth stitch and half stitch are the rudimentary stitches for all lace making. As in knitting, once you have learned the basic stitches, there are no patterns that cannot be built up. The particular pattern simply depends on the combination of these stitches or the addition of an extra 'twist' of the threads.

For detailed information on materials required, see Bobbin lace chapter 1, page 2506.

The basic stitches

You will need:

12 bobbins.

Flat lace pillow and two cover cloths.

Pricking card.

Graph paper with 8 squares per 2.5cm (1").

Pencil.

Pricker.

Brass pins and pin cushion.

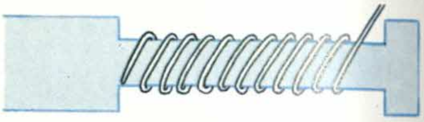
Thread—begin by using a fairly thick thread such as DMC coton perlé No.8 or Anchor pearl cotton No.8.

Winding bobbins

Bobbins are wound in pairs.

☐ Hold a bobbin in the left hand with the narrow end or 'long neck'—the section on which the thread is wound—pointing towards the right hand.

☐ With the right hand, wind the thread on to the bobbin, starting at the left-hand side of the long neck. Wind the thread over and away from you in a clockwise direction (fig.1). The thread must be wound evenly and tightly.

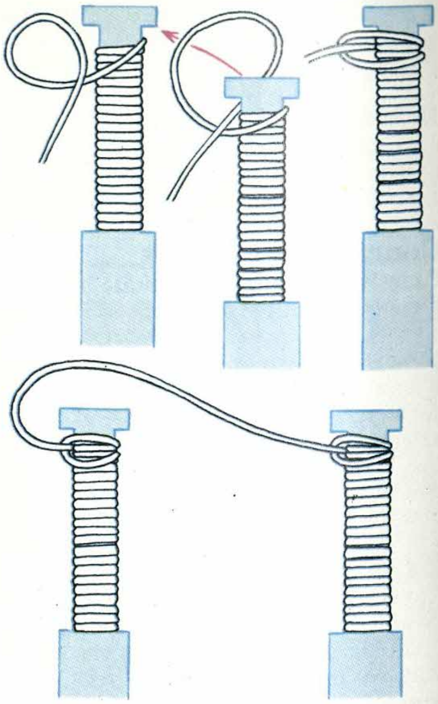


1. *Wind thread on to the long neck.*

☐ When you have wound about 1m (1yd) of thread on to the bobbin, pull out another 1m (1yd) of thread from the ball of yarn, and cut off.

☐ Wind the thread on to another bobbin, starting at the cut end of the thread, and winding it in the same way as the first bobbin.

☐ When there are about 15cm (6") of thread left between the two bobbins, make a 'hitch' on the thread of each bobbin (fig.2).



Coral Mula

2. *Wind and hitch bobbins in pairs.*

This secures the thread in that it prevents it from unravelling freely, but you can pull out more thread as you need it.

☐ Wind six pairs of bobbins in all.

This petticoat is trimmed with a piece of late 19th century Torchon lace.

The pattern

☐ Cut out a piece of pricking card about 23cm (9″) by 2.5cm (1″).

☐ Cut out a piece of graph paper with 8 squares per 2.5cm (1″) to the same size.

☐ Transfer the pin marks shown in fig.3 to the graph paper with a pencil.

☐ Pin the graph paper on top of the pricking and on to the pillow.

☐ Holding the pricker vertically, prick out the holes where marked.

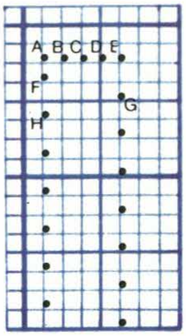
☐ Remove the graph paper. The pricking is now ready for use.

☐ The pricking should be pinned firmly on to the pillow lengthwise. It should be central widthwise and only about 5cm (2″) to 7.5cm (3″) from the top of the pillow.

☐ Cover the lower half of the pricking with a cover cloth to protect the threads as you work, and pin the cloth tightly to either side of the pillow.

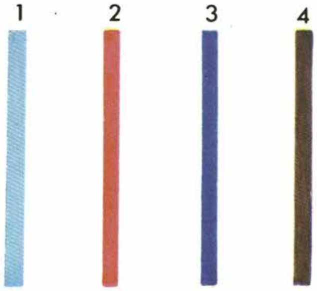
Cloth stitch

☐ Following fig.3, put a pin in each of the holes A to F and hang a pair of bobbins on each pin.



3. *Pin-holes are marked on graph paper.*

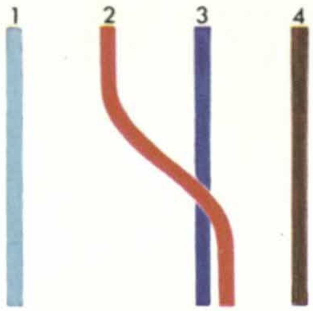
☐ Begin by working with the pairs hanging from pins F and A. The pair from pin F should be on the left of that from pin A. Number the positions of the four threads in your mind from left to right as 1, 2, 3 and 4 (fig.4). Note that these numbers represent the positions of the threads and not the threads themselves.



4. *Starting position of four threads.*

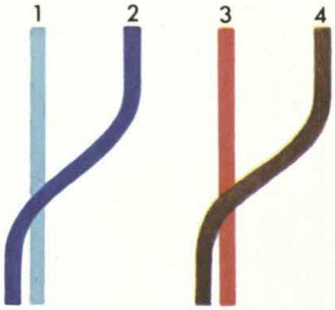
Coral Mula

☐ Using one hand, lift the thread in position 2 over that in position 3 (fig.5).



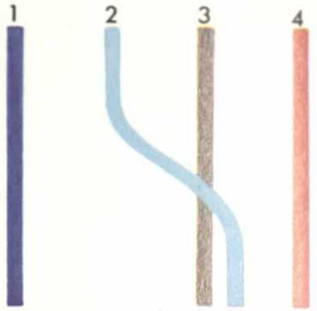
5. *First movement of cloth stitch.*

☐ Using both hands simultaneously, lift the thread in position 2 over that in position 1, and the thread in position 4 over that in position 3 (fig.6).



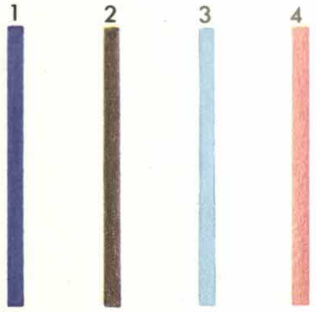
6. *Use both hands for second step.*

☐ Using one hand, lift the thread in position 2 over that in position 3 (fig.7).



7. *Third movement of cloth stitch.*

These three moves constitute a cloth stitch. Note that the two pairs of threads from pins F and A have completely changed places (fig.8).



8. *The pairs have changed places.*

Jerry Tubby

Working a piece of Spider and Fan lace; instructions for this type of Torchon pattern are given in a later chapter.

☐ Push the left-hand pair of threads aside to the left and take the pair hanging from pin B from the right.

☐ Work another cloth stitch using the pairs from pins F and B in exactly the same way.

☐ Then push the left-hand pair aside to the left as before.

☐ Continue working in cloth stitch, taking the pairs of threads from C, D and E in turn.

The pair from pin F has now travelled right across the pattern to the right-hand side of the work, weaving through all the other pairs. It is this pair that does all the work and it is called the 'weaver', while the other threads, which lie straight down the pillow, are called the 'passives'.

☐ Twist the weaver threads twice by lifting the right-hand thread of the weaving pair over the left-hand one and then repeating the move.

☐ Insert a pin in hole G to the left of the weavers.

☐ Make another cloth stitch with the weavers and the pair of threads from pin E exactly as before, but this time push the right-hand pair to the right before taking the next pair from pin D.

☐ Continue working back across the pattern from right to left in cloth stitch, taking the threads from D, C, B and A in turn.

☐ When the weavers reach the extreme left of the pattern, twist the weavers twice as before.

☐ Put a pin in hole H to the right of the weavers and work back across the pattern to the right.

Note: in whichever direction you are weaving, the cloth stitch and the twists at the ends of rows are worked in exactly the same way. Only the side to which you push each pair aside as you have finished working with it, and the side from which you take the fresh pair, will alter.

It is important to obtain good tension in lace making. A useful working hint is to hold the weavers firmly at the end of each row when you have worked the twists and inserted the new pin and to stroke the passives in a downward direction.

☐ Work a sample length of lace in this stitch, until you can work it automatically, without referring to instructions.

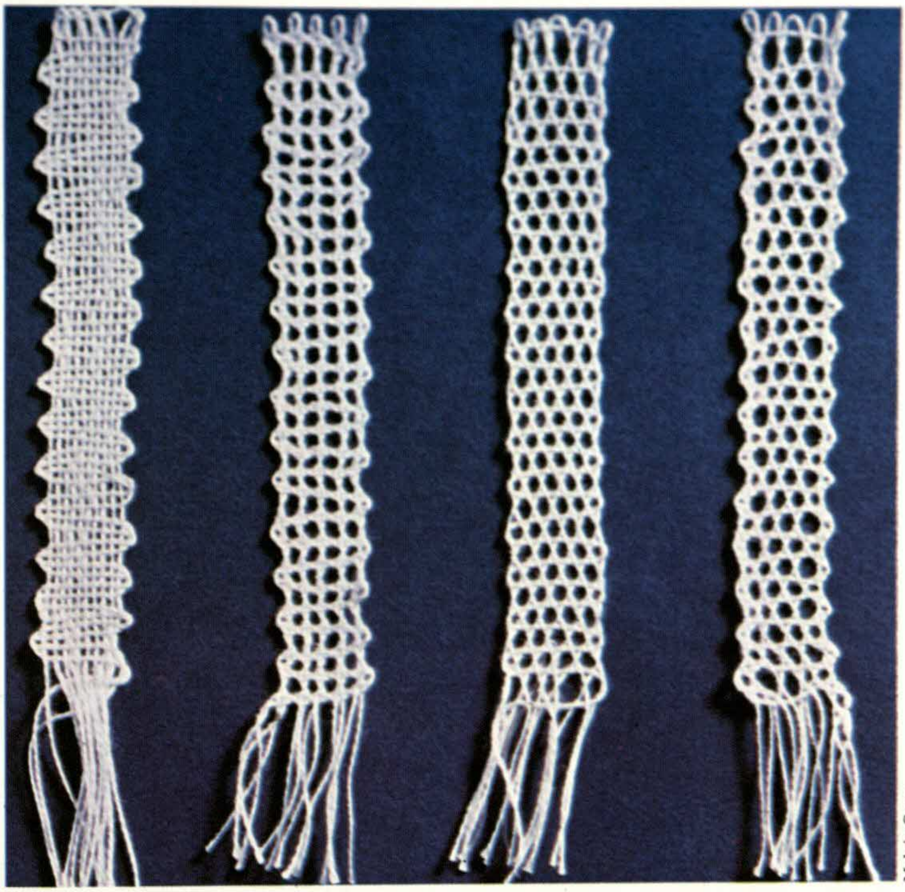
Cloth stitch and twist

This is a variation on cloth stitch which produces a very firm stitch.

☐ Work each cloth stitch as before but then repeat the second step of the cloth stitch each time, twisting each pair of threads once, right over left (see fig.6). Thus each stitch is made up of four, rather than three, moves.

☐ At the end of each row, before inserting the next pin, twist the weavers once more only. (Since they have just been twisted once already, this makes two twists in all.)

☐ Practise this stitch until you can work a neat length of the pattern.



Cloth stitch; cloth stitch and twist; half stitch; half stitch with cloth stitch and twist at the edges.

Melvin Grey

Half stitch

Half stitch is the only other basic stitch. As its name implies, there are fewer movements involved than in cloth stitch.

☐ Each half stitch is made up of the first two movements only of the cloth stitch (see figs.5 and 6). Work across the row towards the right as before.

☐ Before inserting the next pin at the end of the row, twist the right-hand pair once more only (since they have just been twisted once in the last move, this makes two twists in all).

You should soon realize that, in fact, only one of the original weaving threads is travelling across the work and that all the other threads are travelling diagonally.

This is rather a loose stitch when used on its own. When you have gained confidence in working this and the previous stitches, try working cloth stitch and twist with the first and last pairs of each row (from A and E), and half stitch with the middle three pairs (from B, C and D).

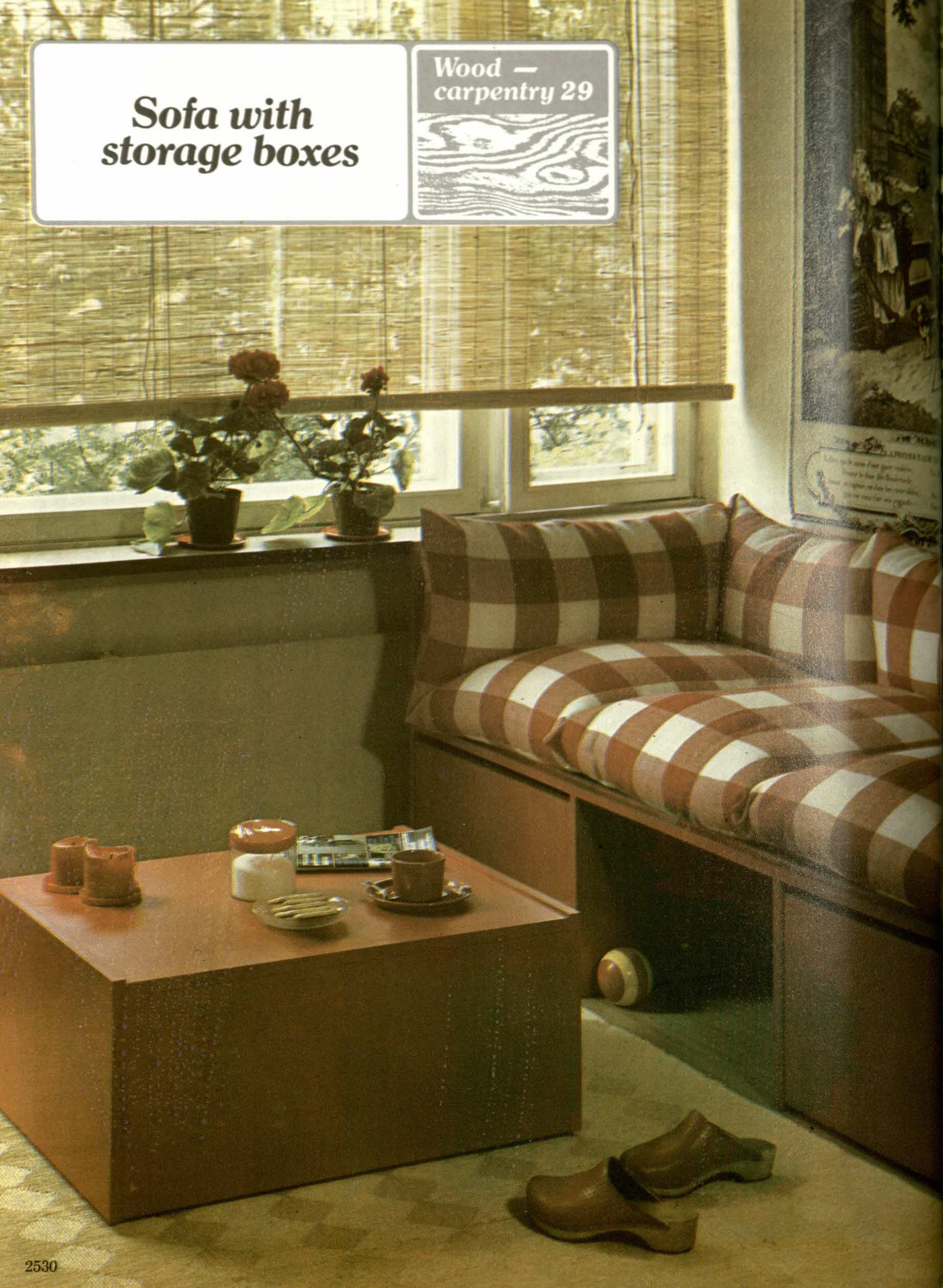
Note: when you reach the bottom of the pricking, secure each loose thread carefully to the cover cloth with a pin to keep them all in their correct positions. Fold the cover cloth over the threads and the bobbins to take the tension off the threads, and remove all the pins from the pricking card. Lift the lace very carefully to the top of the pricking card and replace the side pins (F, G, H and so on) along the first 2.5cm (1″) or so of the lace. Remove the pins holding the loose threads in place, and carry on working, being careful at first not to pull too hard on the passive pairs of threads.

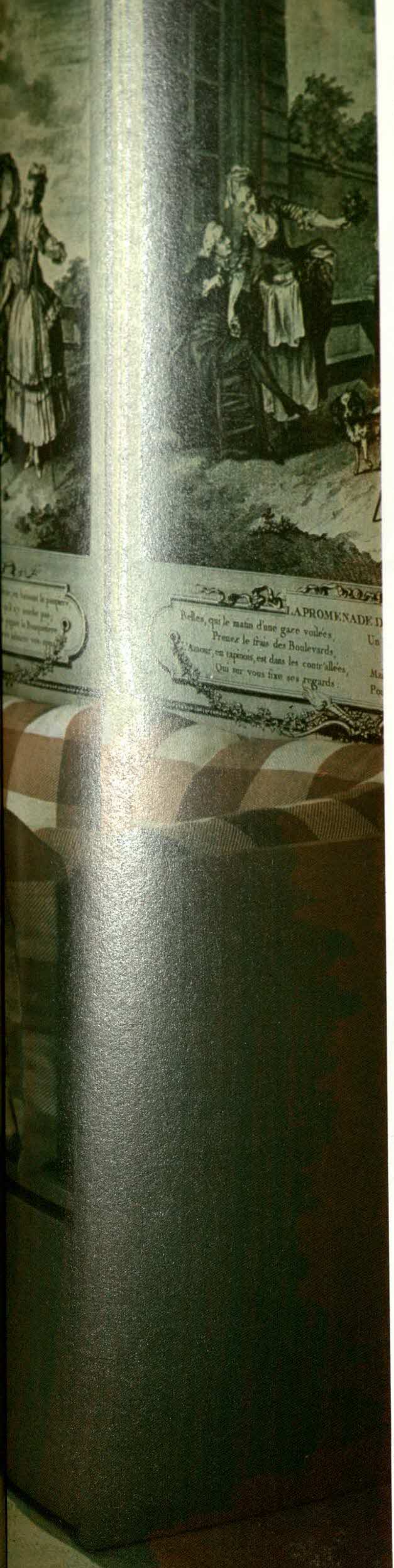
Work a length of lace in each of these stitches until you can do them automatically, watching the threads just below the pins rather than the bobbins.

Working a corner in Torchon lace.

Jerry Tubby

Sofa with storage boxes





You may often have felt the need for unobtrusive storage space in such parts of the home as a small sun room or living-room where cupboards and shelves would be a hindrance. One way of overcoming this difficulty is to take another look at the space already utilized in the room. The area beneath a sofa, for example, is an obvious place for storage. This chapter describes a versatile sofa, simple to make, which has three storage boxes beneath the seat. The boxes are mounted on castors and can be fitted with lids or left open. If lids are fitted a pulled-out box makes an ideal coffee table.

An added feature of the sofa is that it can be converted to serve as a bed if the need arises. The cushions shown here are made from foam chips inside a heavy covering fabric. If, however, the sofa is to serve as a bed on frequent occasions a more comfortable arrangement for sleeping would be to make the seat cushion from a single piece of foam. The side and back cushions are made in the same way for both types of sofa.

The sofa is made from 19mm (¾") thick plywood and the boxes from 19mm (¾") raw or plain chipboard. Plywood is used on the sofa because it is stronger than chipboard. However, if you wish to economize, the sofa can be made from 19mm (¾") chipboard but the seat must remain plywood.

The sofa is 191.8cm (75½") long, 80cm (31½") wide and 75cm (29½") high.

You will need:

One piece plywood 188cm (74") long and 781mm (30¾") wide—for the seat.

One piece plywood 188cm (74") long and 750mm (29½") wide—for the back.

Two pieces plywood 80cm (31½") long and 750mm (29½") wide—for the sides.

Two pieces plywood 78.1cm (30¾") long and 381mm (15") wide—for the partitions.

One piece ramin batten 188cm (74") long, 12mm x 12mm (½"x ½").

5cm (2") long No.8 countersunk wood screws.

Drill with 3mm (⅛") bit.

White woodworking adhesive, medium and fine grade glasspaper and paint (primer, undercoat and final coat).

Mallet.

Dowelling jig (see Carpentry chapter 24, page 2250).

Other tools as for previous chapters.

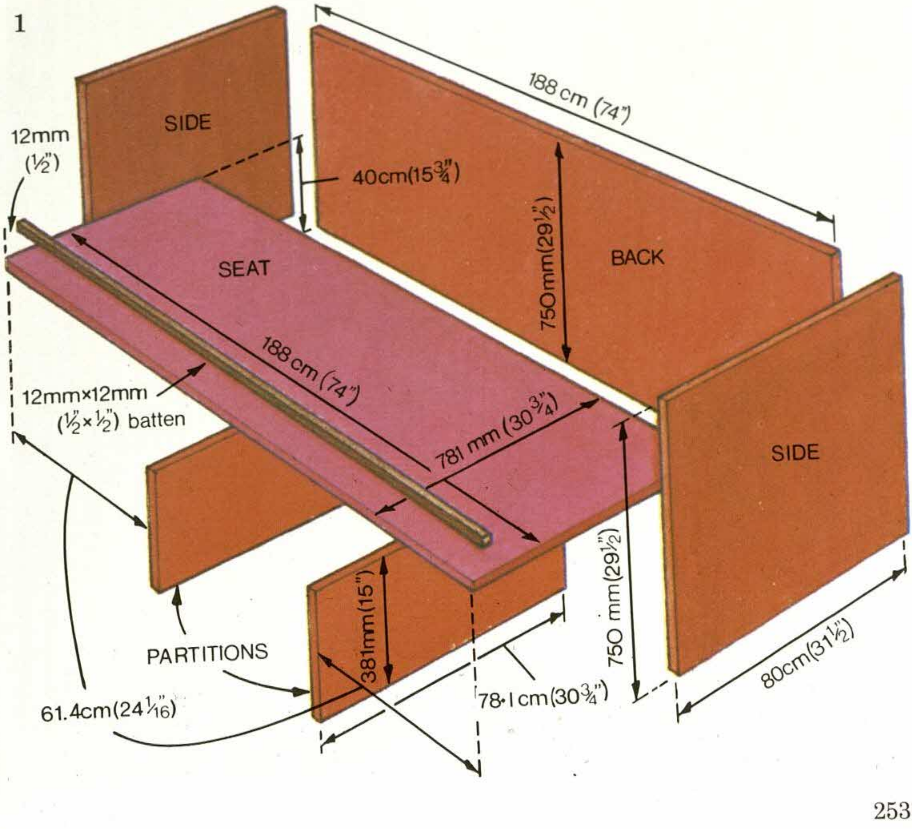
☐ Have the plywood cut to the required dimensions (fig.1). The edges should be sanded smooth before you begin working.

☐ Along the front of the seat glue the 188cm (74") length of ramin, 12mm (½") in from the edge. This strip acts as a stop for the seat cushions and is not necessary if a single piece of foam is used for the seat.

Left: brightly painted sofa with storage boxes beneath the seat. The boxes are mounted on castors and can be pulled out to serve as low tables.

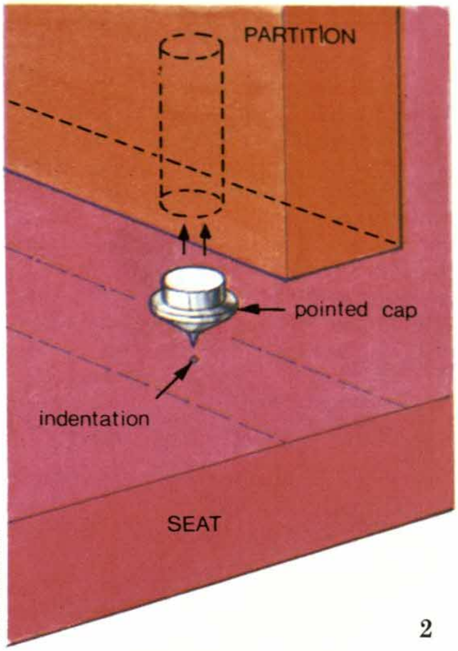
1. *A construction diagram of the sofa, giving dimensions.*

1



Camera Press

Paul Williams



Paul Williams

2

☐ The partitions beneath the seat are fitted first. Using the dowel jig and the 3mm (⅛") drill bit, drill holes at approximately 15cm (6") intervals into the long edge of the partition.

☐ Place the pointed caps provided with the jig into the holes and position the partition in place on the underneath of the seat (fig.2).

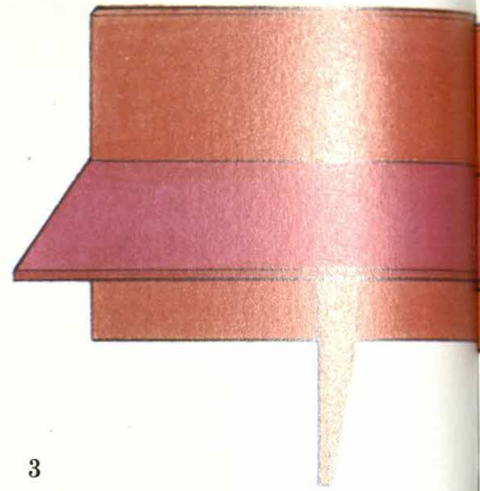
☐ Keeping the partition in place, tap it lightly with a mallet and then lift off. The pointed caps will leave indentations along the width of the seat showing exactly where to drill the corresponding screw holes (see fig.2).

☐ Repeat the procedure for the other partition. Place glue along the edges to be joined and fix with countersunk screws.

☐ Again using the dowelling jig, drill holes along the back edge of the seat to take the back. Drill the first hole 10cm (4") in from the end and the rest at 20cm (8") intervals.

☐ Assemble as shown in fig.3 and mark corresponding holes in the back, and drill the holes.

☐ Place glue on edges to be joined and fix with countersunk screws.



3

Storage boxes

The storage boxes can be used to hold magazines, blankets and sheets or as general storage space for children's toys or sewing materials. The following instructions are for one storage box made from 19mm (¾") thick chipboard.

You will need:

Two pieces chipboard 70cm x 35cm (27½"x 14")—for the sides.

Two pieces chipboard 55cm x 35cm (21¾"x 14")—for the front and back.

Two pieces chipboard 70cm x 55cm (27½"x 21¾")—for the lid and base.

Four pieces 19mm x 19mm (¾"x ¾") ramin batten, 35cm (14") long.

Four pieces 19mm x 19mm (¾"x ¾") ramin batten 10cm (4") long.

8mm (⅜") dowelling 50cm (20") long.

Two pieces 19mm x 19mm (¾"x ¾") softwood, 70cm (27½") long.

Two pieces 19mm x 19mm (¾"x ¾") softwood, 51.2cm (20¼") long.

2.5cm (1") long No.8 countersunk screws.

8mm (⅜") drill bit and 25mm (1") auger bit.

Four castors with screw-plate fittings.

Other tools and materials as for sofa.

☐ Follow the same construction technique used for the boxes in the modular unit, described in Carpentry chapter 24. Remember that the chipboard used here is thicker.

The distance from the bottom edge of the carcass to the underneath surface of the base, depends on the length of the castors used. Allow for at least 4mm (⅛") clearance above ground when the castors are attached.

☐ The base is set inside the carcass. Following fig.5, construct a softwood frame around the inside edge of the carcass. The softwood is glued and screwed to the sides of the carcass.

☐ The chipboard base is then glued and screwed to the frame work with the No.8 countersunk screws.

☐ Use castors with a screw-plate fitting as shown in fig.6. If you are unable to obtain short enough castors to give you enough clearance between the top of the box and the seat reduce the height of the box accordingly. Castors with an overall height of 4.7cm (1⅞") have been used here.

Camera Press

Left: two storage boxes showing different ways of fitting the lid.

☐ Attach sides (fig.4). Use the dowelling jig to drill holes into the edge of the back and along edge of seat.

☐ Fit the side flush with the back and along the width of the seat and mark corresponding holes in sides. Remove side and drill holes.

☐ Check that the corners are square and then fasten with glue and countersunk screws.

The completed sofa is then sanded down and all traces of glue removed. Wipe the sofa with a damp cloth to remove any dust. Allow to dry thoroughly and then paint.

4

☐ Strips of 19mm ($\frac{3}{4}$") square ramin batten 10cm (4") long are fastened 4.5cm ($1\frac{1}{2}$") down from the top of the box with glue and countersunk screws. The lid then rests on top of these battens (see fig.5). An alternative is to let the lid rest on the sides of the box as shown opposite. To do this cut the lid 3.8cm ($1\frac{1}{2}$") wider and the side of the box 2.5cm (1") shorter than the size given.

☐ A hole is cut in the centre of the lid with the 25mm (1") auger bit to serve as a handle.

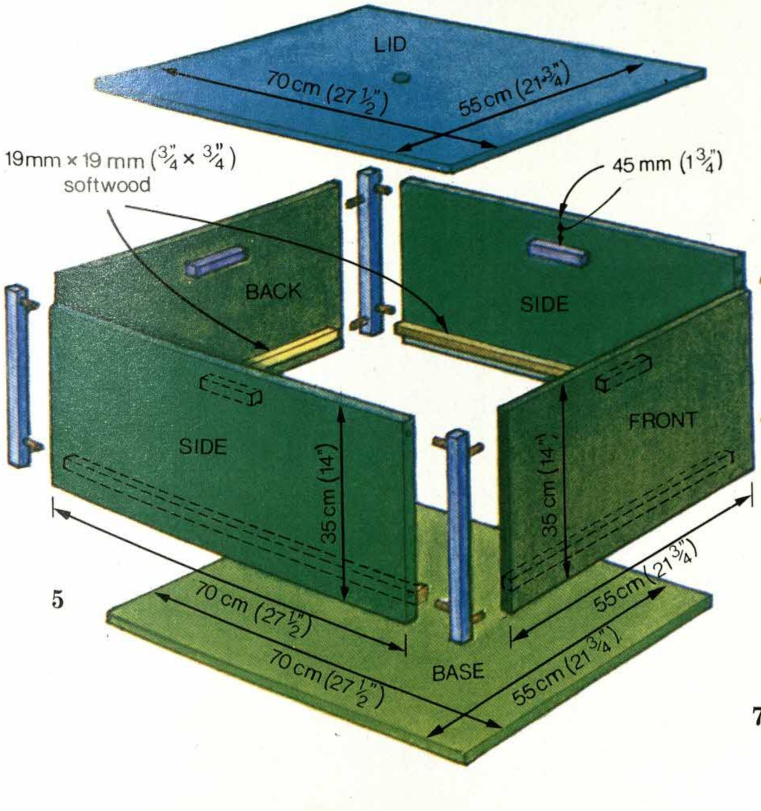
☐ Finish the box as for the sofa.

Upholstery

The cushions shown in the photograph are the simplest method of making cushions. For the seat, two pieces of 122cm (48") wide material are sewn together and folded with the seam down the centre. You may be able to find material wide enough to cover the seat—for example calico—which would do away with this step. Stitch the material at either end. Seams are placed to divide the material into three cushions (fig.7). The finished length of the seat cushion is 188cm (74"). The final length and width of the material depends on the amount of stuffing you use. Allowance must also be made for the hems at either end.

The back cushions are all separate and the overall size of each is 62cm ($24\frac{1}{2}$") long and 35cm (14") wide. The side cushions are similar in construction but are 78cm (30") long and 35cm (14") wide. Buy enough material to allow for stuffing and seams.

For a sofa-bed, a single mattress-like cushion is recommended for the seat. Use a single piece of 10cm (4") deep foam 185cm (73") long and 78cm (30") wide.



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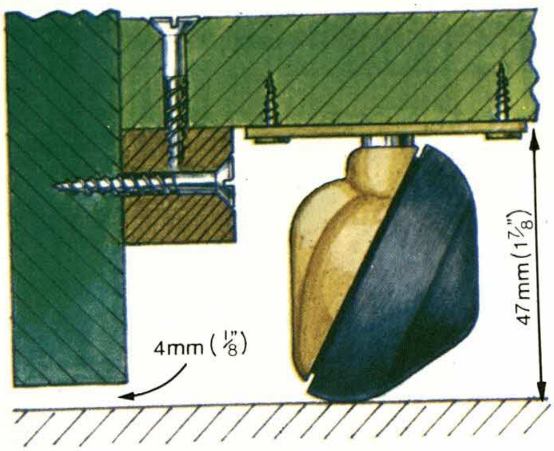
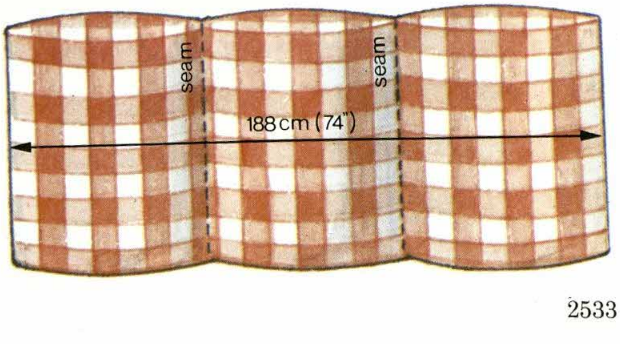




7

Trevor Lawrence

Cardboard furniture

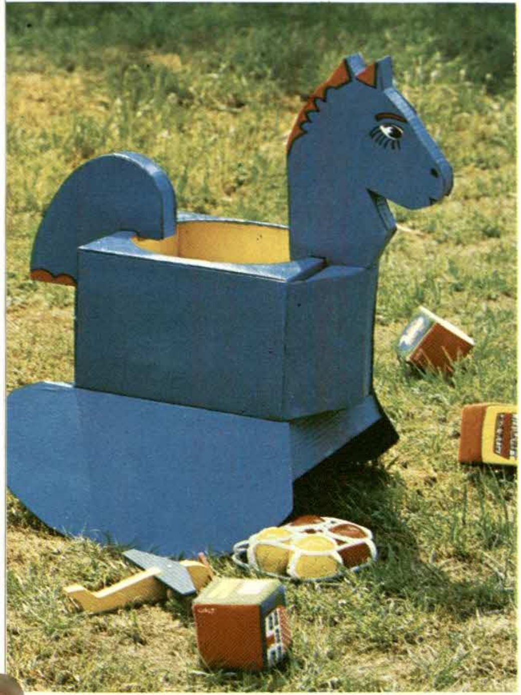
Paper 66

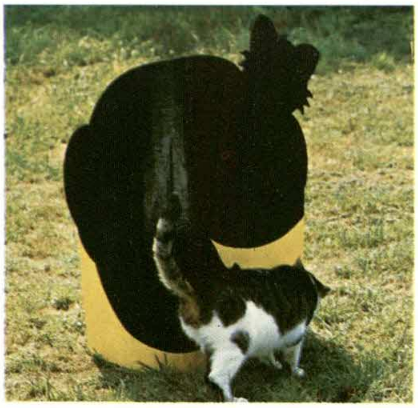
Cardboard furniture is surprisingly strong, versatile and easy to construct, using cartons and boxes of corrugated cardboard. Such furniture costs virtually nothing to make and you can use your imagination to design seats, tables and shelves with amusing or interesting shapes.

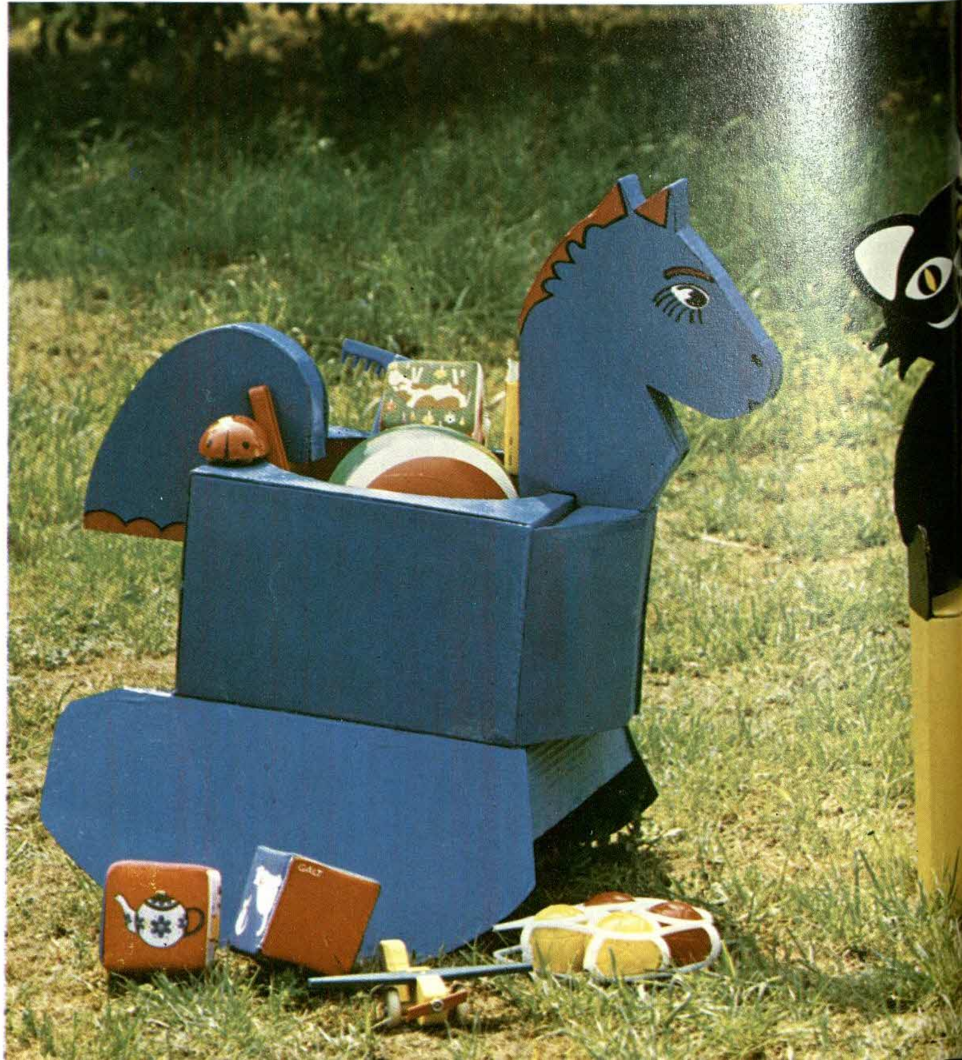
The seat and toy box illustrated were designed for young children but even an adult can sit in the seat without risk of it collapsing. Using bigger boxes and enlarging the graph patterns given on page 2537 the objects can easily be made on a larger scale.

Tools and materials

Cardboard furniture, particularly that intended to take someone's weight, is best made from the kind of cartons in which heavy bottles, such as those containing wines or spirits, are packed. Such cartons are strongly made to protect the fragile glass bottles and their expensive contents, and are







therefore eminently suitable for furniture making.

When you obtain these boxes (from supermarkets and liquor stores) make sure that they still have their dividers: these strengthen the furniture.

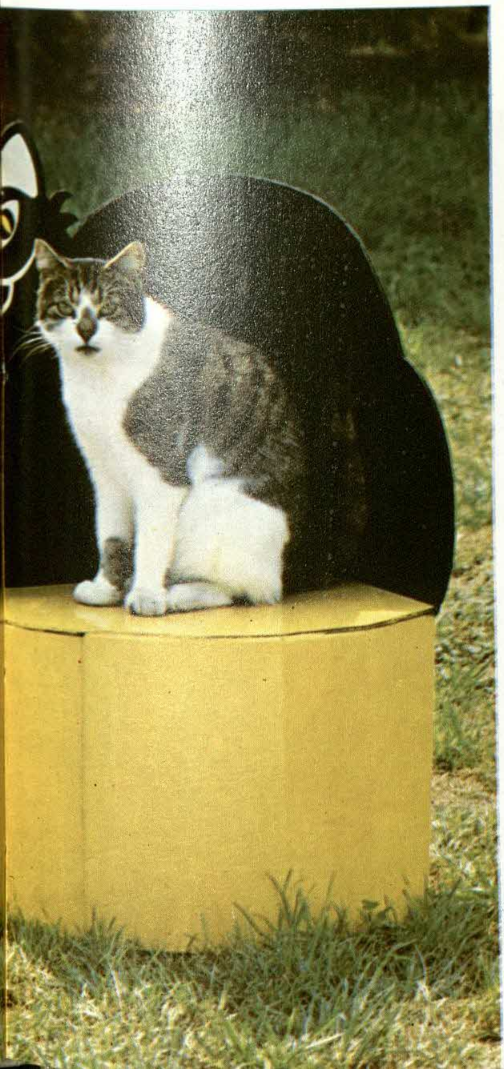
You will need:

Several cardboard boxes.

Sharp knife such as a kitchen knife or a handyman's knife (as used for cutting carpets).

Ruler (preferably 1m (1yd) long).

Cardboard furniture is cheap to make and fun to play with, and sturdy enough to be used for outdoor games. All furniture designed by Horatio Goni.



Jerry Tubby

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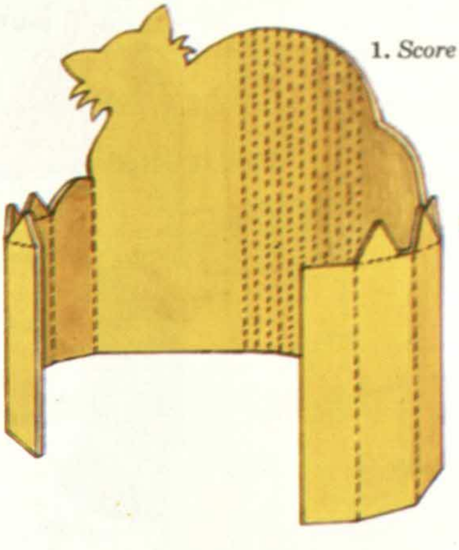
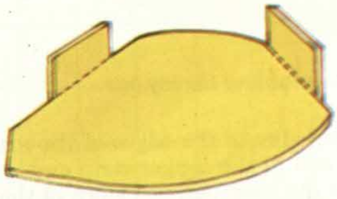
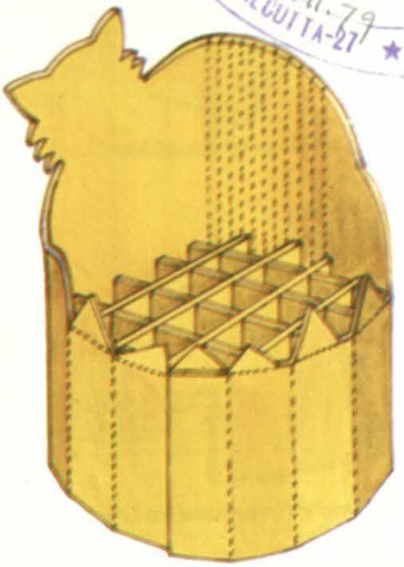


1. *Score along dotted lines.*



2. *Bend seat and base flaps.*



3. *Strengthen seat with dividers.*

Coral Mula

Heavy-duty sticky tape (in appropriate colour) such as carpet tape.

Tracing paper, pencil.

Clear general-purpose adhesive such as Evo-stik, for assembling the pieces.

Gloss paints in bright colours—and paint brushes.

Pieces of white or coloured paper, if you wish to cut out features in paper and stick them on the cardboard, rather than paint them on.

Child's seat

The yellow seat with the black cat curled round it is made from three pieces of corrugated cardboard, strengthened inside with bottle dividers. It is 50cm (20″) wide and 30cm (12″) high to the seat. With the back, its overall height is approximately 76cm (30″).

You will need:

Tools and materials as previously described.

A piece of cardboard 76cm wide and 150cm long (30″x 60″) with the corrugations running across its width.

Two pieces of cardboard 35cm x 55cm (14″x 22″), one for the seat itself and one for the base.

If necessary, tape pieces of cardboard together to obtain the size required.

☐ Trace off and enlarge the graph patterns overleaf, transfer to cardboard pieces and cut round their outline with a sharp knife.

☐ Using a ruler and the knife, score the cardboard as illustrated along the dotted lines on main piece and bend to curve inwards (fig.1).

☐ Score along the dotted lines on the seat and base and bend up the flaps so that they are at 90° angles to the rest of the cardboard (fig.2).

☐ Apply clear general-purpose glue to the lower, inner edge of the main piece and to the outer, left-hand edge of this piece, to a depth of 7.5cm (3″). Apply glue to the outside edges of the two flaps on one of the smaller pieces.

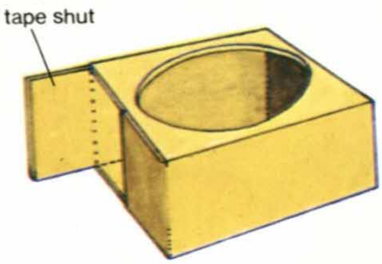
☐ With the smaller piece (base) on a flat surface and using the scored lines on the larger piece, bend it round the base piece, including the flaps, and stick the right-hand edge over the left-hand edge to a depth of about 7.5cm (3″) on each side.

☐ Cut bottle dividers to fit and slide them into the middle of the assembled pieces so that they fit tightly. They will strengthen the seat (fig.3).

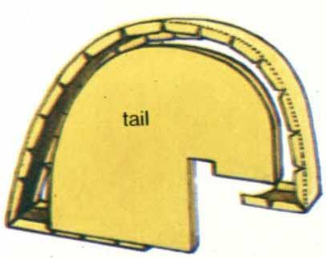
☐ Bend down the triangular flaps on the main piece and glue them to the bottle dividers.

☐ Apply glue to the underside of the other small piece (the seat top) and to the outer sides of the two flaps. Place in position on top of the bottle dividers, sliding the flaps down between the back of seat and the bottle dividers.

☐ Paint the assembled seat with black and yellow gloss paint. Paint on features or cut white and yellow pieces of paper for the features and stick them in position with clear general-purpose glue such as Evo-stik.

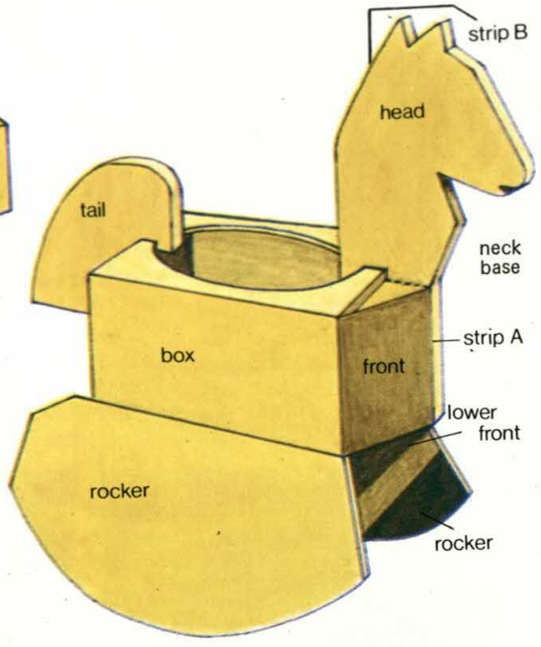


4. *Cut hole in centre of box.*



5. *Bend strip around tail piece.*

Coral Mula



6. *Assembling the toy box.*

Toy box

The toy box resembling a rocking-horse is made basically from a single cardboard box measuring about 35.5cm x 32cm (14"x 12½") and 21.5cm (8½") deep, with its opening taped shut and set on its side (fig.4).

You will also need:

Two large boxes, such as wire cartons, from which to cut rockers, head, face and front pieces.

Strips of cardboard 6.5cm (2½") wide, one measuring 69.5cm (27") long for the tail, one 67cm (26½") long and one 48.5cm (19") long, both for the head. Make sure the corrugations run across the strips, to allow them to bend more easily. These will make the head and tail more realistic.

☐ Cut a hole in the centre of the box, on one of the sides measuring 35.5cm x 32cm (14"x 12½"), so that it is cut about 2.5cm (1") from the centre of each side (see fig.4).

☐ Score and bend the strip of cardboard for the tail, as indicated on the graph pattern. Bend all the edges in the same direction.

☐ Take one of the tail side pieces and, following the curves on it from point X to point Y, bend strip to correspond. Apply glue to the edge of the strip and attach to inside edge of the tail side (fig.5). Repeat with the other tail piece and the other edge of the strip.

☐ Using clear general-purpose glue, attach the tail to the centre of one of the shorter sides of the box (fig.6).

☐ Attach the strips for the head between the two head shapes in the same way as for the tail, strip B between point Y and point X, strip A between point Y and point Z, though it will extend beyond Z (see graph pattern). Apply glue to the edges of the extending end of the longer strip and attach over the long, flapped sides of the two fronts, which are also glued together.

☐ Score and bend the edges of the neck base and attach them to the inside top of the two fronts. You now have a complete horse's head and neck section, ready to stick to the front of the box. Bend under, glue and attach at the remaining unglued edges of the head and neck section to the front of the box.

☐ Score and bend the edges of the rockers and attach to the base of the box.

☐ Score and bend the edges of the lower front and glue as a strut between the two rockers.

☐ Paint the rocking-horse with blue and yellow gloss paint and paint or stick on features.

Table

This sturdy table is 114cm (45") long, 51cm (20") wide and 35cm (14") high.

You will need:

Tools and materials as previously described.

Two sturdy cardboard boxes measuring approximately 23cm x 33cm x 35cm (9"x 13"x 14").

A strong, stiff sheet of cardboard measuring approximately 51cm x 114cm (20"x 45").

☐ Strengthen the two boxes with cardboard bottle dividers. Stick boxes shut and, with clear general-purpose adhesive, stick the two boxes under the large sheet of cardboard, about 23cm (9") from each end and the same distance from each other.

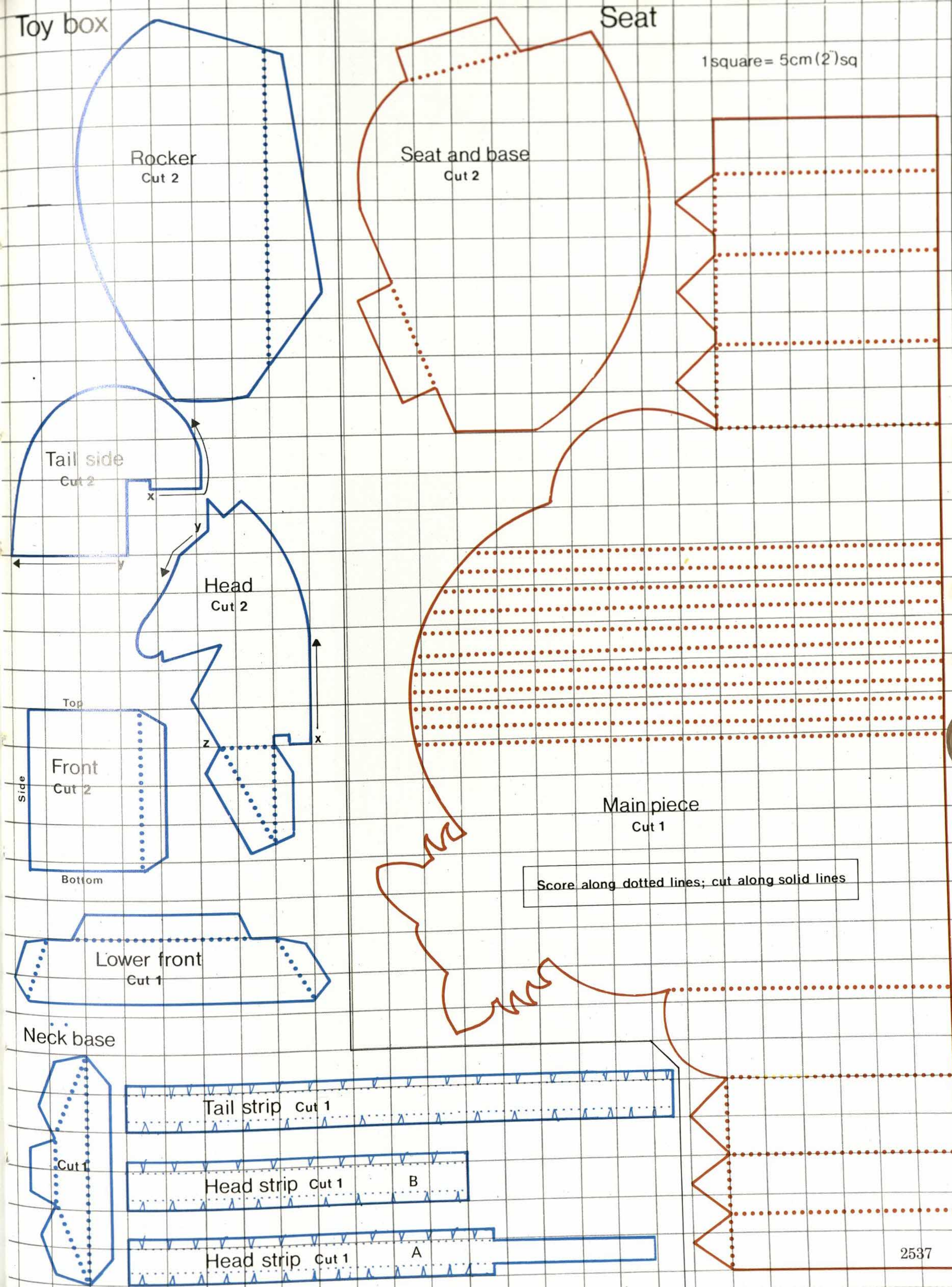
☐ Paint table with green gloss paint and bind the edges of the table with green tape as shown below.

Cardboard table, painted and trimmed.

Jerry Tubby

Toy box

Seat



1 square = 5cm (2") sq

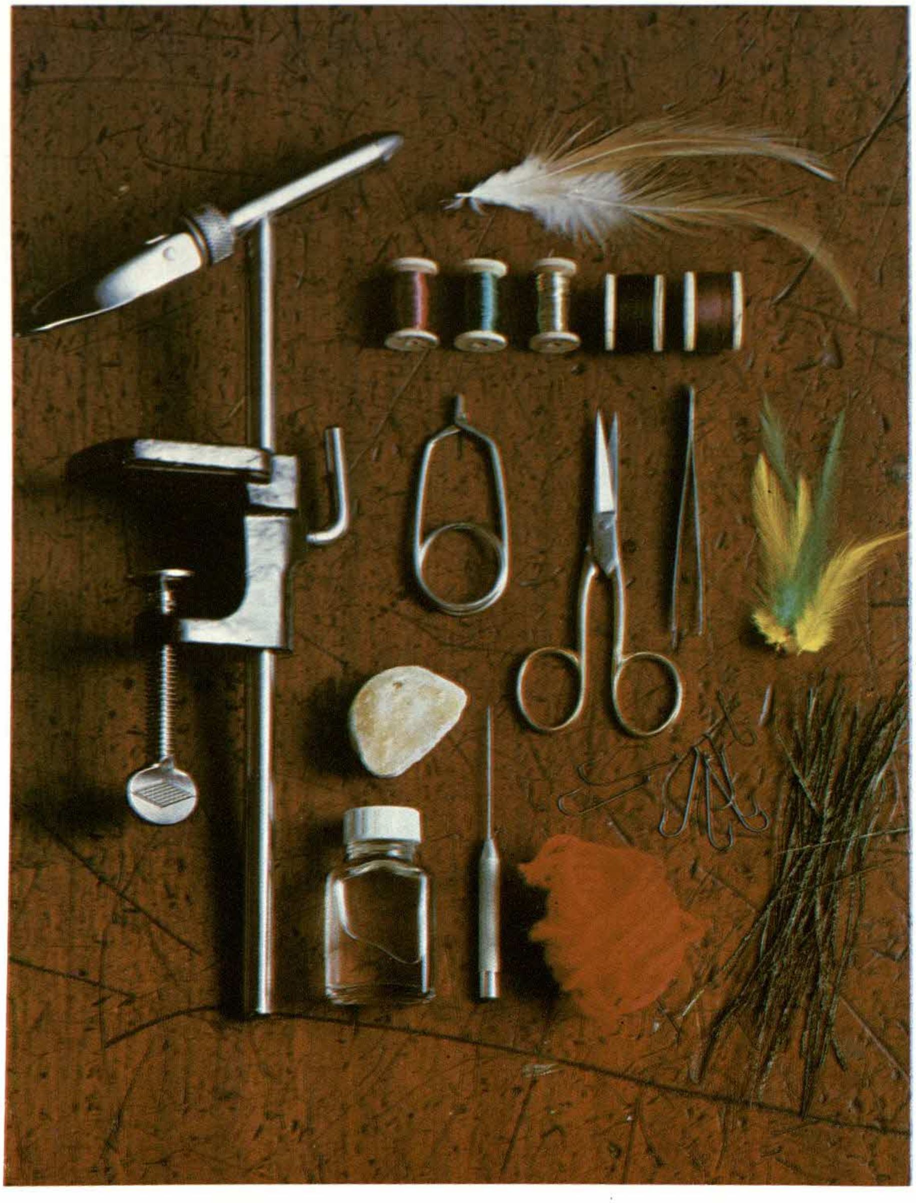
Score along dotted lines; cut along solid lines

Introduction to fly tying

As shown in the previous chapters, feathers have both a practical and ornamental use. Fly tying is one of those crafts which puts the splendour of feathers to a practical use, utilizing their colours and forms to lure fish.

The first fishing fly was no doubt tied by a prehistoric hunter who tied a feather to a bone hook when he ran out of bait. Over the ages the technique was perfected until the high point of fly tying was reached in the late 19th century and the early part of this century. It was at this time that the English fisherman lifted the imitation of the natural insect to almost an art form. The craft has since spread throughout the world.

Fly tying equipment including a vice, hackle pliers and dubbing needle together with wax and varnish and some dressing materials—wool, herl, feathers, silks and tinsel.



Melvin Grey

Each new generation of fly tyers leaves a legacy of new patterns and names many of which are descriptive and some comical—eg 'thunder and lightning' or 'yellow torrish'. There are now many thousands of fly patterns across the world, each country producing flies to suit the particular habitat.

Although there are as many varieties of fly as there are people making them, there are basically two categories: the floating or dry fly and the sinking or wet fly. The dry fly floats on the surface of the water whereas the wet fly is used below the surface. Some are delicate imitations of the natural insect, faithfully copying nature's own flies while others are attractors which have no natural counterpart, but catch fish nonetheless. There appear to be no rules as to what the fly should imitate.

Equipment

The practising fly tyer will have a bewildering collection of feathers, furs, hair, wool, silks, tinsels, varnish, waxes and tools. Don't let this prospect alarm you for, like many crafts, the most difficult step is the first. The equipment and simple beginnings described here can be the basis of an absorbing and rewarding hobby.

A vice is needed to hold the hook firmly while you attach the dressing. There are various types available but if you are going to pursue the craft seriously, a fairly large screw-type vice is ideal as both trout and salmon hooks can be held in it.

Scissors. A small pair of fine, pointed, sharp scissors is essential.

Hackle pliers. These are used to hold the fine ends of feathers, leaving your fingers free to manipulate other materials. The pliers should not be stiff and the jaws should meet truly to give a firm grip.

Bobbin holder. This is used to hold the tying silk.

The tying silk may be either silk especially used for fly tying or it may be a glossier floss silk—ie a coarse fluffy silk—used as body material on the fly. The tying silk is available in many colours but this is of no consequence as it is usually concealed on most flies.

Fly-tyers' wax, available in liquid or solid form, is used to coat the tying silk.

Varnish is used to 'seal' the final knots in much the same way as sealing wax is used. It is usually a celluloid varnish and best applied with the tip of a darning needle or a special needle termed a dubbing needle.

Right: a tranquil scene showing a fine selection of flies. The large flies on the basket are used for salmon fishing.

Jerry Tubby

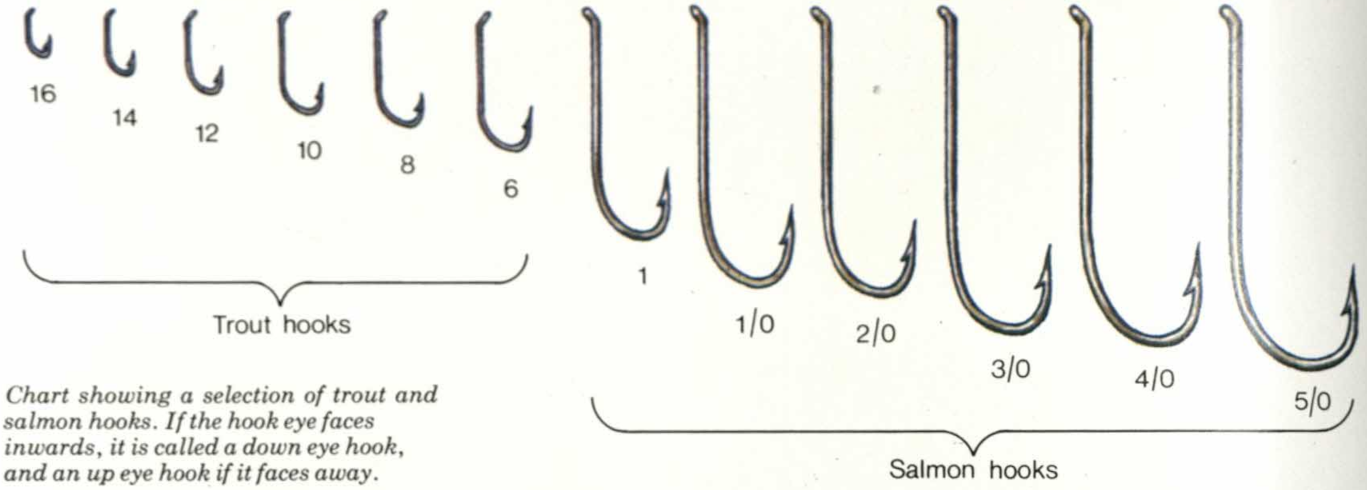


Chart showing a selection of trout and salmon hooks. If the hook eye faces inwards, it is called a down eye hook, and an up eye hook if it faces away.

Hooks. The two scales used for measuring hooks are commonly known as the old and new scales. The old scale is given here the most widely used and differences between the two are marginal. Salmon hooks are generally larger than trout hooks and the chart shows a range of both. Salmon hooks go up to No.9/0 but these are very large and used only by professional anglers. As the hooks used for trout flies are usually very small you may wish to practice on larger salmon hooks. These first attempts can always be used for a decorative effect on hats.

Dressing

The materials required for any fly are called the dressing. The fly illustrated here (fig.1) is nicknamed the 'Blue Zulu' and is a dry fly.

Starting at the bend of the hook, the protruding part of the fly is called the tag. This can be made from coloured silk, wool or herl. Herl is the name given to the long-fibred feathers taken from the tails of peacocks or ostriches. It is used sometimes on the main body of the fly.

The main wrapping of the hook is called the body and over the body are turned the palmer hackles. Palmer hackles are so termed because they are tied in such a way as to resemble certain furry insects, such as caterpillars.

Hackles are the tapered feathers from the neck of a bird, used extensively in fly tying. Some of the hackles used in fly tying can be obtained from a poulterer. The colours can be natural—eg black, brown, and ginger—or dyed. There are other sources for obtaining feathers and these are mentioned in Featherwork chapter 1, page 773, which also discusses techniques of dyeing feathers. Confusion sometimes arises due to the fact that what is termed the hackle on a fly is not necessarily the hackle feather of a bird.

The rib (see fig.1) is wound over the body hackles and gives the impression of the segments of the insect body. The ribbing can be made from wire or thin tinsel, usually of a gold or silver colour. The thickness or width varies with the fly.

The large furry mass behind the eye of the hook is the main hackle, wrapped around to provide the legs and wings of the insect (see fig.1).

Flies and fish

Because the dry fly floats on the surface of the water the fly tyer must take into consideration the buoyancy of the materials he uses. Some professionals trim the feathers they use. Removing the soft ends of the individual fibres serves to stiffen the feathers but is not necessary for the fly made here. Wet flies make use of absorbent materials such as wool or floss silk.

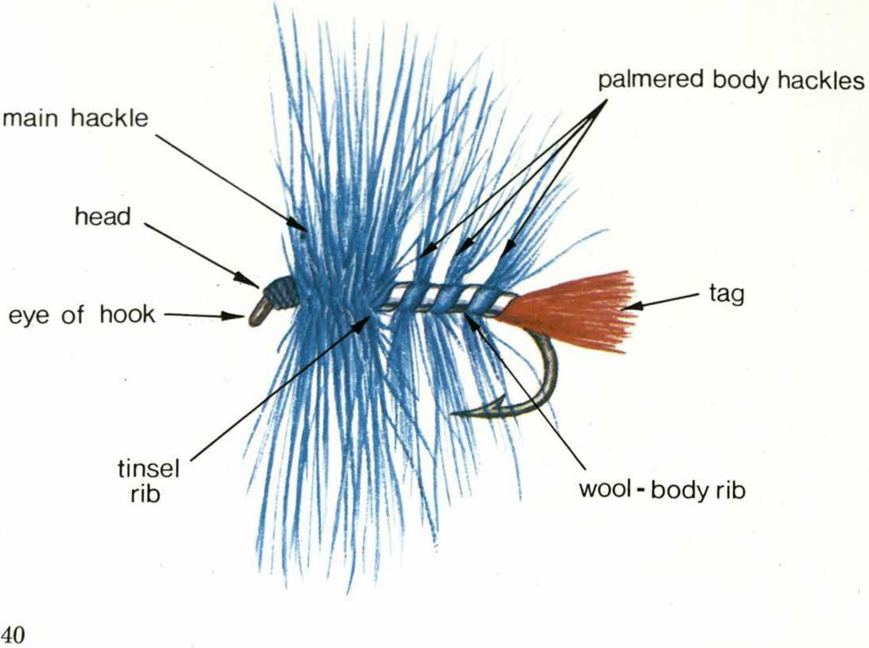
However, do not feel bound to adhere to textbook or traditional instruction on what or what not to use for flies. Fly tying is as much a matter of personal experimentation as technical know-how.

The fish the fly tyer is trying to lure are the salmon, sea trout, trout and grayling. Some of the 'coarse' fish, such as the rudd, chub and the dace are also willing to take the fly.

Trout flies are normally more simple in their construction and dressing than salmon flies. Although the basic tools and materials are the same it should be kept in mind that salmon flies use larger hooks and some of the delicate vices used for trout flies will be incapable of holding firmly the larger salmon hook (or iron, as it is termed).

Blue Zulu

The following instructions are for making up the 'Blue Zulu' described earlier. It is a dry trout fly, beautiful in its own right and illustrates the basic technique of fly tying.



1. *An enlarged diagram of the dry fly, Blue Zulu, listing some of the main features which form the fly.*

Paul Williams

You will need:
No.10 trout hook.
Red silk for the tag.
Blue wool for the body.
Silver tinsel for the rib.
Palmer hackle—small hackle feathers dyed blue.
Main hackle—large hackle feathers dyed blue.
Tying silk—ordinary and floss.
Vice, sharp pointed scissors, hackle pliers, bobbin holder, darning needle or dubbing needle—obtainable from specialist fishing shops.
Tyer's wax and clear varnish.

☐ Fasten the vice to a work table under a good source of light—an adjustable desk lamp is ideal.

☐ Open the jaws of the vice, insert the hook and tighten firmly on the actual bend of the hook, leaving the shank exposed and lying horizontal.

☐ Put the silk into the bobbin holder.

☐ Wax 30cm (12") of silk by pulling it smartly through the wax a couple of times. Friction melts the wax thus it is applied evenly; slow waxing almost inevitably leads to broken silk.

☐ Wind a few turns of the waxed silk firmly around the hook shank, behind the eye, trapping one end of the silk to prevent it unravelling.

☐ Now wind the silk down the shank towards the bend of the hook with tidy, tight turns (fig.2).

☐ When the start of the bend is reached, tie off the end of the silk temporarily by winding it on to the rubber holder provided on the vice.

☐ Take a small piece of red silk and tie on to the shank of the hook with a few turns, cutting off any surplus. This forms the tag (fig.3).

☐ The wool for the body and the tinsel for the rib are now tied in (fig.4).

☐ Once this is done the tying silk is wound tidily up to the eye, leaving a small place behind the eye.

☐ The woollen body is now wrapped around the shank, until it is fully covered (fig.5).

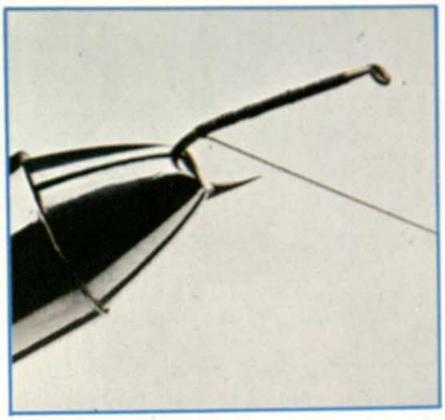
☐ The palmer hackle is tied in (fig.6). Use the hackle pliers to wrap it with open turns until it reaches the tag, where it is tied off by a turn of tinsel.

☐ The tinsel is, in turn, wrapped back towards the eye in a similar manner. Any surplus is then cut off (fig.7).

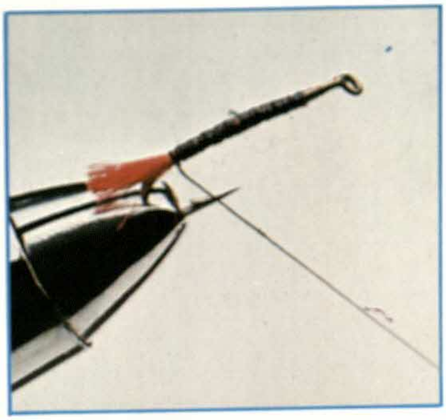
☐ The main hackle is now tied in for the final stage. This is wrapped around the shank behind the eye and, when in position, the end is tied off and the surplus feather removed (fig.8).

☐ The space between the eye and the hackle is built up with turns of tying silk until a head is formed. The silk is then tied off by making several half hitches over the eye.

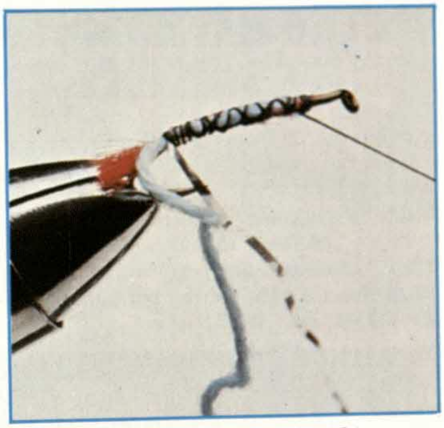
☐ A drop of varnish applied with the darning or dubbing needle will seal the head and finish the fly (fig.9).



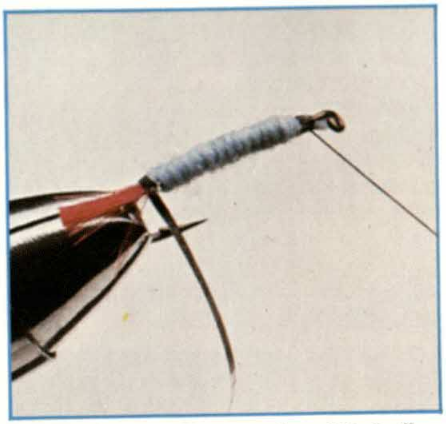
2. *Tying silk wound evenly down shank.*



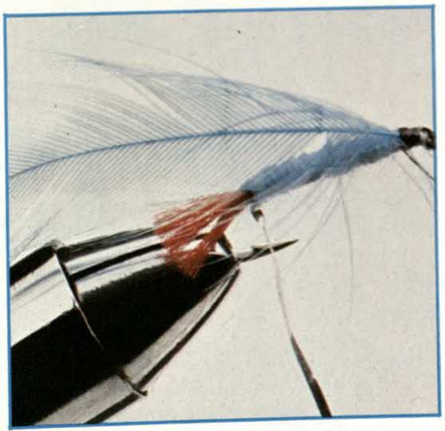
3. *Red floss silk tied in to form tag.*



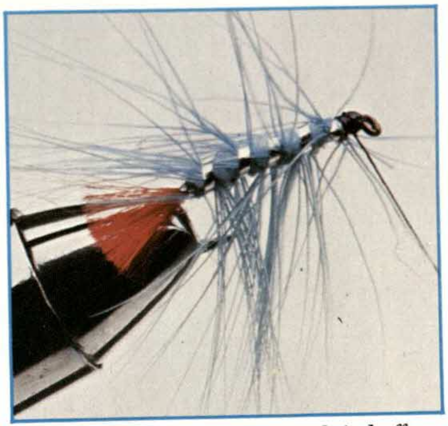
4. *Tinsel and wool for body tied in.*



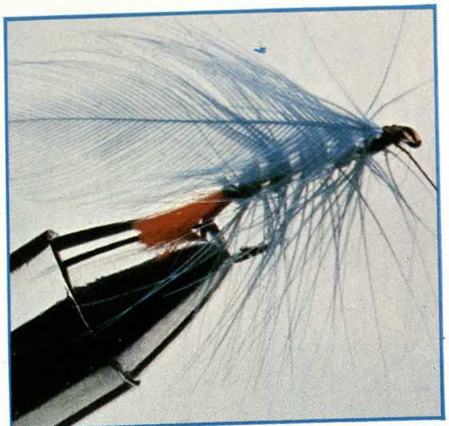
5. *Wool body fully wound and tied off.*



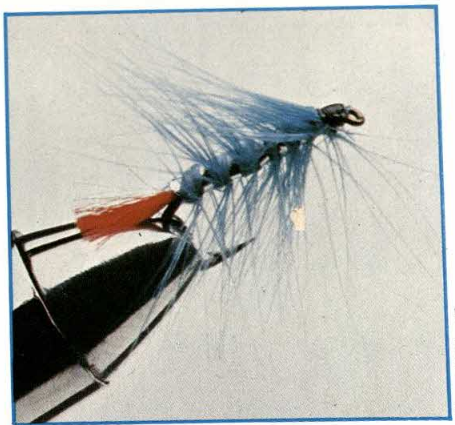
6. *Palmer hackle for body tied in.*



7. *Tinsel rib fully wound and tied off.*



8. *Main hackle feather tied in.*



9. *The completed Blue Zulu trout fly.*

Steve Bicknell

More ideas for typewriter art

Colour — printing 25

Almost any picture, design or photograph can be translated into typewriter art. Abstract designs and the translation of photographs are covered in the previous chapter; the technique described in this chapter is more suitable for the reproduction of pictures though it can be used to translate photographs of any sort into typewriter art.

Often the visual impression given by a typewriter picture can be very similar to tapestry or cross stitch and will have taken just as long to compose.

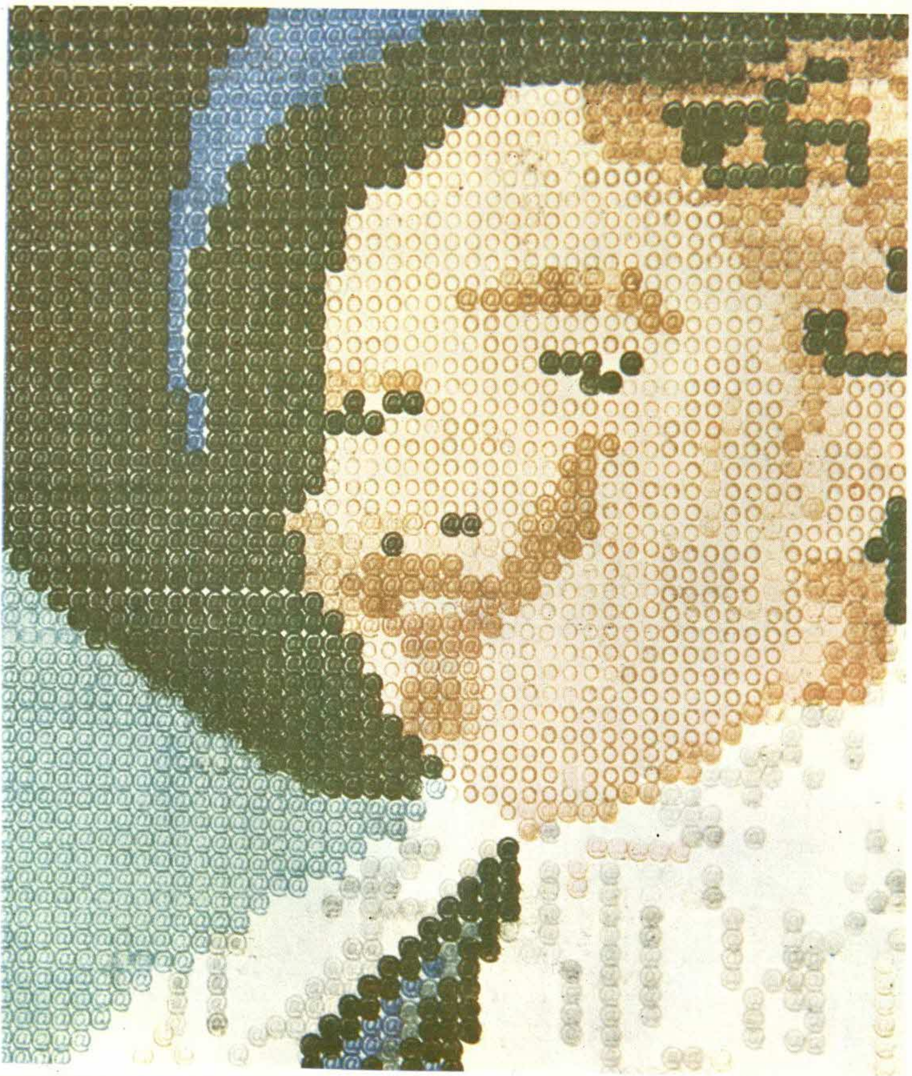
The planning of the picture is the most important stage and requires both time and patience.

Selecting a subject

Almost any painting or photograph can be chosen—art books often provide inspiration. You can also create your own design and reproduce it as typewriter art. Size is an important point to consider. The length of the typewriter carriage is the main limitation to the size of the picture.

If you wish to frame a picture a 2.5cm (1″) border should be left all round the actual typing.

Start by reproducing simple sketches such as the dogs illustrated overleaf. After practice and experimentation progress on to more sophisticated shaded works.



Planning a coloured picture

It cannot be over emphasized how important accurate planning is to producing a successful typewriter picture.

You will need:

Typewriter (a manual one if possible).

Picture to be reproduced.

Tracing paper.

Graph paper (preferably with the same number of squares per 2.5cm (1″) as there are characters per 2.5cm (1″) on your typewriter).

Coloured pencils or felt-tipped pens.

Coloured typewriter ribbons. Typewriter ribbons can be bought in various colours apart from the standard black/red, blue/red. Overtyping one colour with another to make a third produces a full range of shades and tones. Yellow typed over red makes orange; yellow typed over blue makes green; red over blue makes purple.

☐ Trace and transfer the outline of the picture on to the graph paper.

☐ Replace the tracing paper on the original and roughly outline the different coloured areas.

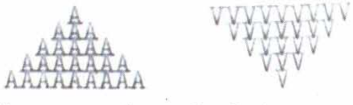
☐ Transfer these to the graph paper.

☐ Colour in the squares of the graph paper with the appropriate colours.

Size. The typeface of your typewriter should now be considered in relation to the squares on the graph paper.

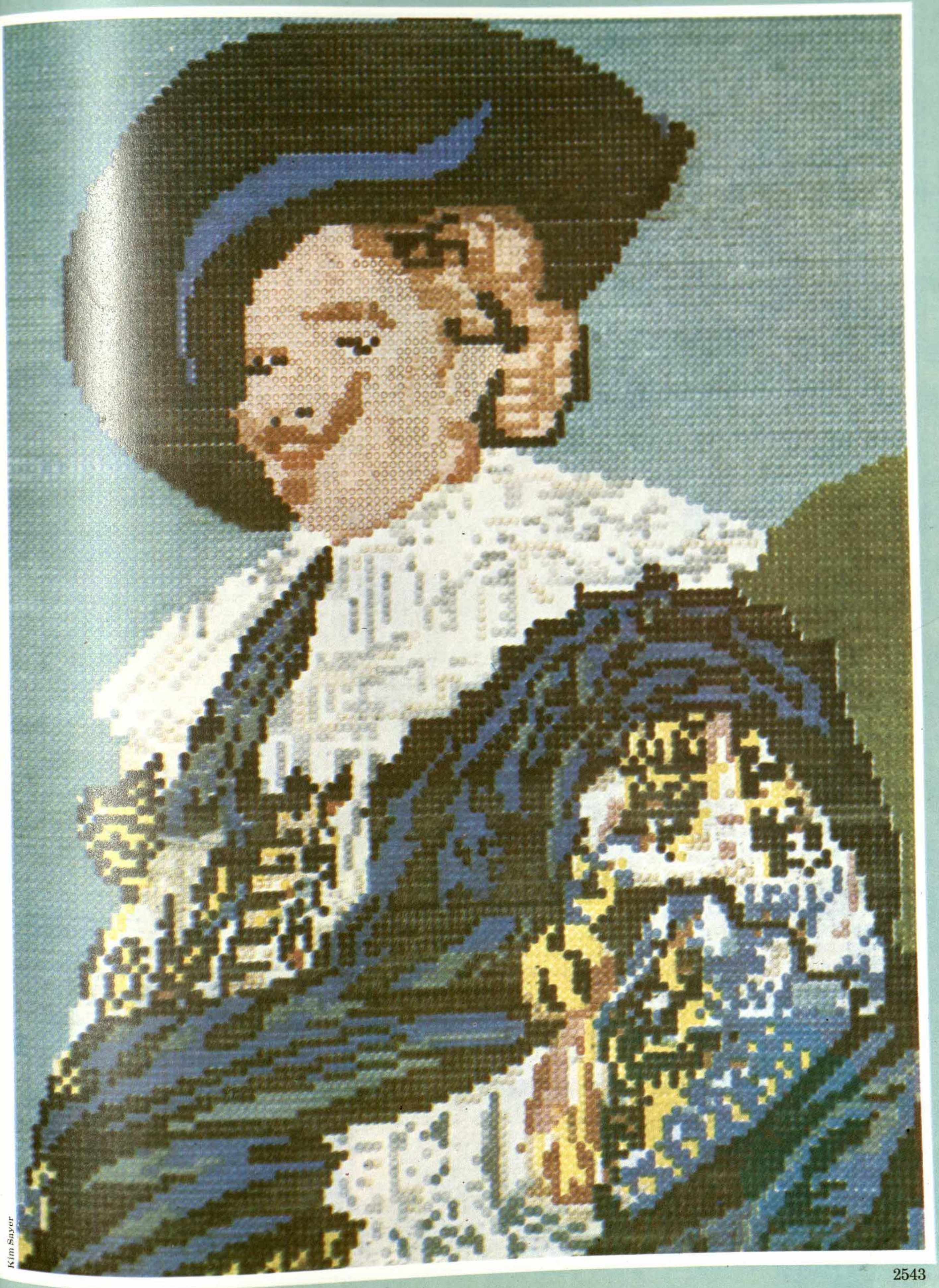
Assuming that the characters on your typewriter are set at 10 spaces to 2.5cm (1″) and you wish to produce a finished picture the same size as the original design you should use graph paper which has ten squares to 2.5cm (1″). (By using graph paper of either more or less squares to 2.5cm (1″) than that of your typewriter, the finished picture will automatically come out smaller or larger respectively.)

The type characters used will all give different impressions and if used imaginatively will create varied results. Any combination of letters, figures or characters can be used. The letter 'x' will give a cross-stitch effect. The character '@' will give a bold circular impression. The letters 'm' and 'n' give a semi-bold effect. The letter 'o' is suitable for detailed, delicate areas such as hands and faces. An aid to the finished picture is using characters to suit the shape of the design. For a triangular impression the capital letters 'A' and 'V' are useful (fig.1).



1. *Characters shape the design.*

Frans Hal's painting, The Laughing Cavalier (right) was typed by Sylvia Tellalian. The detail (left) shows the characters used.



Kim Sayer

British Typewriter Museum

Police dog Tosca by Will Hollis is a colourful piece of typewriter art. Shading has been created by overtyping.

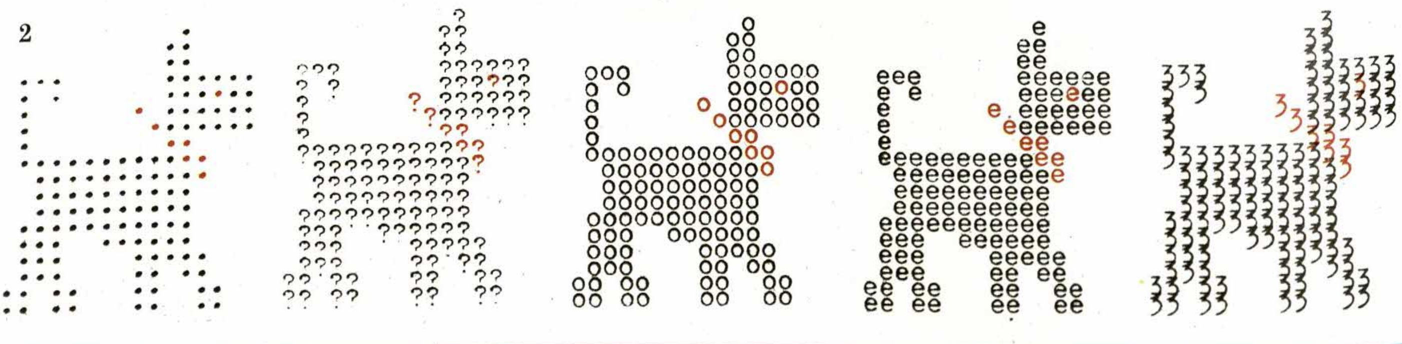
It is important that the beginner should experiment with all the characters on the keyboard to discover the different images that are available (fig.2).

Shaded effects, different tones and colours can all be produced. To produce a leaf which has three different shades of green (fig.3) the same ribbon can be used. To produce the palest green the chosen key is struck once very lightly. In order to obtain a slightly deeper tone, overtype the same character two or three times. To produce the deepest shade overtype the character about eight or ten times until the desired effect is obtained.

Shading may also be obtained by overtyping with a different character or a different coloured ribbon.

Before embarking on the final produc-

2



tion of any typewriter picture, the typewriter artist should experiment and work out the different shaded effects and how they are created. It is worth keeping old typewriter ribbons as they will produce paler shades of the original colours.

Typing the picture

Once the original picture has been transferred to the graph paper (enlarged or reduced to a suitable size), a character or characters selected and shading techniques worked out, it is ready to be typed .

Often this will be a long and tedious process, errors are hard to disguise and often ruin the final work, so do not be impatient.

You will need:

A typewriter (manual if possible).

Paper (see Printing chapter 24, page 2510).

Coloured typewriter ribbons.

A ruler.

An eraser (a semi-hard pencil-type eraser with a brush at the end is most suitable).

Cleaning materials (these include: a hard brush for cleaning the typeface; a long-handled softer brush for cleaning the typewriter generally; methylated spirit for cleaning the carriage and rollers; a duster or rag).

☐ Make sure that the typeface as well as the carriage and rollers are thoroughly cleaned.

☐ Put the correct size of paper in the typewriter, allowing for a margin all round of 2.5cm (1″).

☐ Take the front cover off the typewriter and place the first coloured ribbon on the spools. After each ribbon change make sure the typeface is thoroughly cleaned so that the previous colour is not transferred on to the next colour and thus spoiling the effect. It is also advisable to wash your hands after each ribbon change so as to avoid smudging the paper and spoiling the finished picture.

☐ With the graph paper beside you and the aid of a ruler to help you follow the lines, start typing the spaces in each line in the appropriate colour.

☐ Type one colour at a time, including the shaded areas.

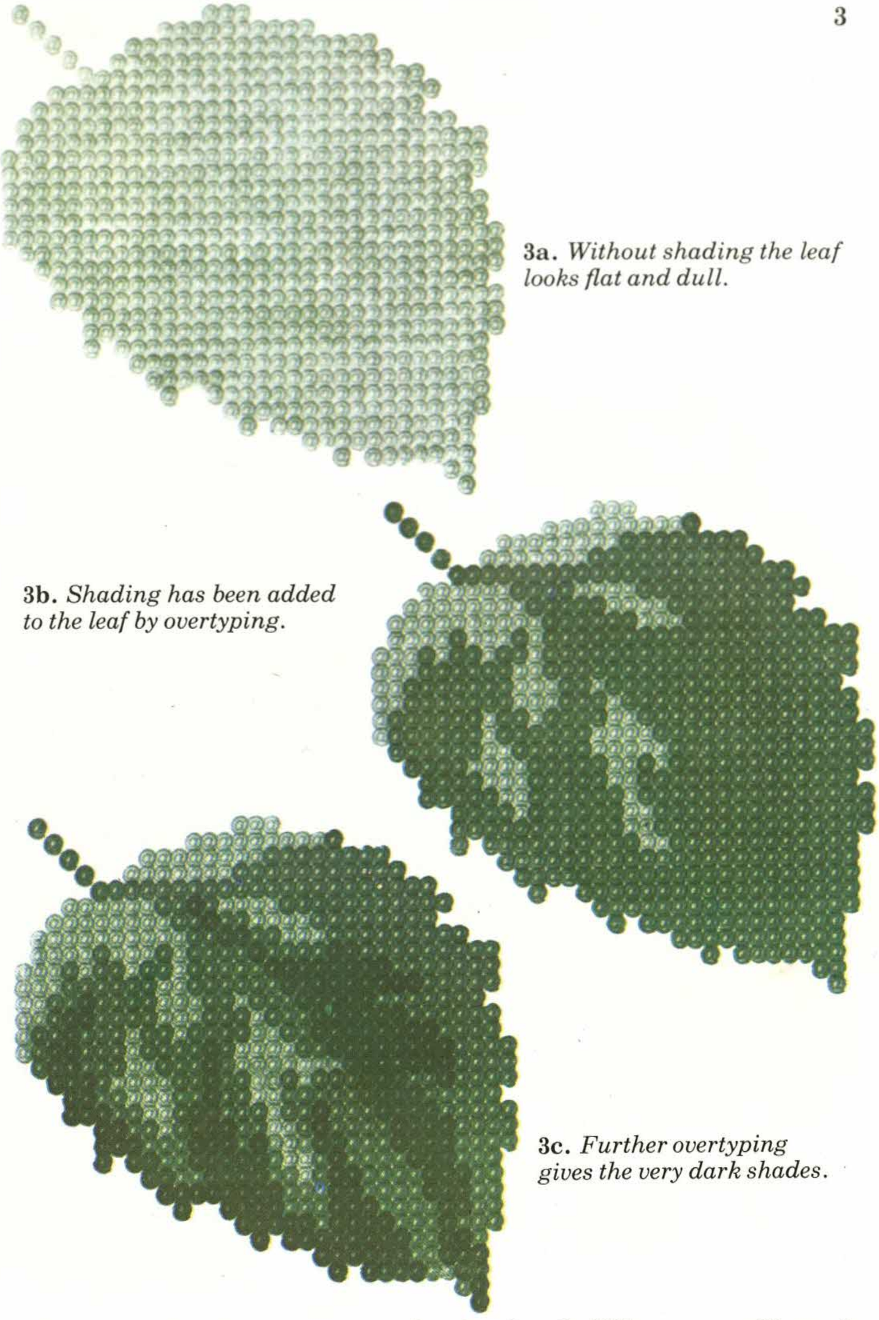
☐ Keep the paper in the typewriter until the picture is finished.

☐ Turn the paper up and down by hand—a half-line space will equal one square on the graph paper.

☐ Continue with each colour in turn until the picture is completed.

Small errors can be repaired using an eraser; major errors may involve retyping on a clean sheet of paper.

3

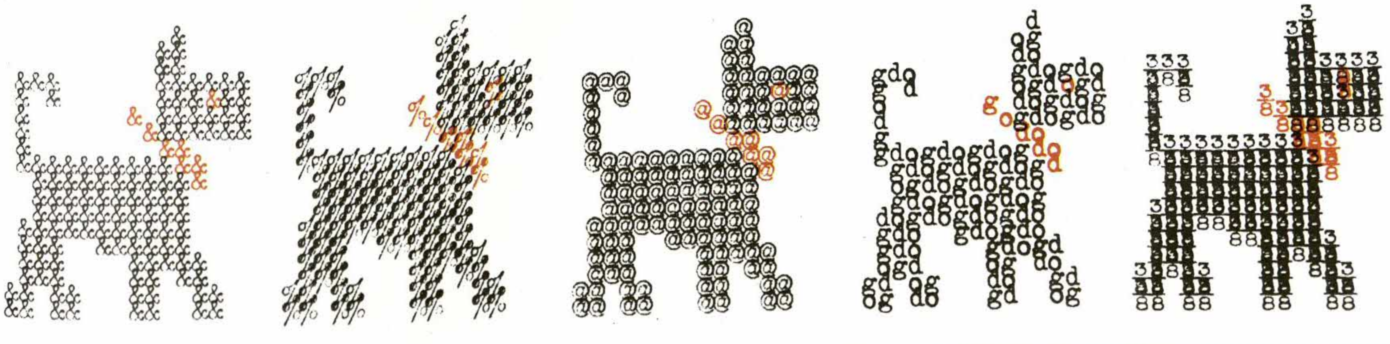


3a. *Without shading the leaf looks flat and dull.*

3b. *Shading has been added to the leaf by overtyping.*

3c. *Further overtyping gives the very dark shades.*

2. *The same picture or design will take on a completely new look when typed with a selection of different characters.*



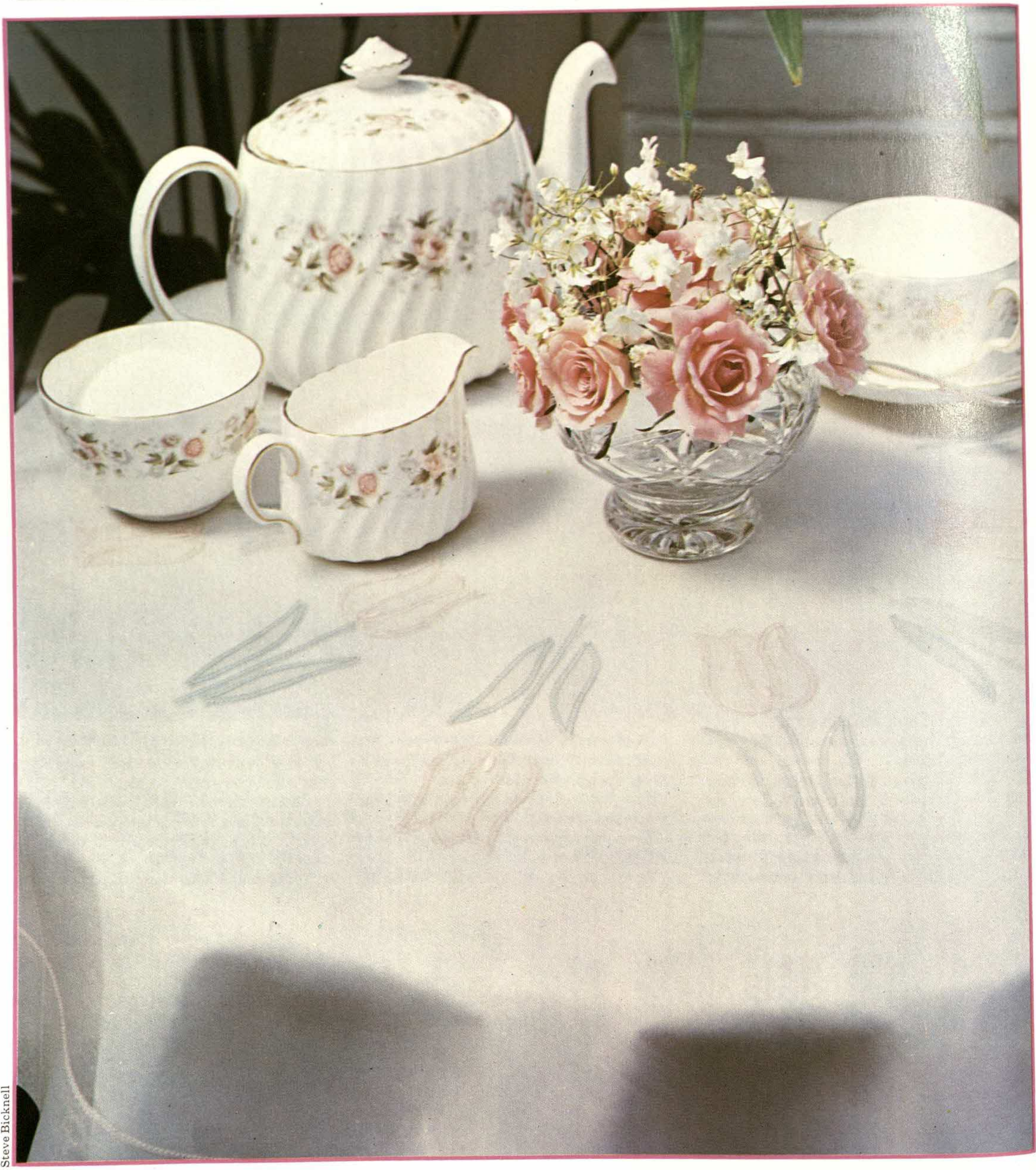
Sylvia Tellalian

Machine appliqué with embroidery

Yarn — embroidery 23

One of the greatest attractions of machine embroidery is that intricate and delicate designs can be completed in a comparatively short time. To achieve anything as complex by hand would involve many hours of laborious work.

Although all the stitch effects described in previous chapters on machine embroidery can be used successfully on their own, some can be used to even



Steve Bicknell

greater effect in combination with appliquéd fabrics and threads.

For instance, you could combine openwork with appliquéd fabric shapes, or free running and cable stitching with appliquéd yarns. Wall hangings, cushions, bedspreads and panels lend themselves particularly well to the use of a combination of techniques.

Appliquéd fabrics

Of the many ways of applying fabrics by machine, one of the quickest, easiest and most effective is that using a frame and free stitching (Embroidery chapter 17, page 2022).

☐ Draw the shape on the fabric to be applied but do not cut it out.

☐ Place it in position on your background fabric and pin, placing the pins at right angles to the edge of the shape.

☐ Insert the fabrics into your frame and set the machine for free running stitch.

☐ Stitch along the outline of the shape once or twice, removing the pins as you go.

☐ Remove the frame from the machine and trim the excess fabric.

You can then work further textural stitching round or over the shape as shown on the cushions in the photograph overleaf.

Several shapes. If you are applying several shapes from one fabric only, a simple method of doing this is to draw the shapes in the required positions on the wrong side of the background fabric, place the fabric to be appliquéd on the right side and then mount the two together with the wrong side of the background facing up.

☐ Stitch round the shapes once or twice, remove the frame from the machine and cut off the excess fabric from the shapes.

Different fabrics. If you are applying several small shapes from different fabrics, cut out the shapes to within 5mm ($\frac{1}{4}''$) of the desired size. Always lay the pieces in position and make sure that the arrangement is pleasing and well balanced before starting to stitch. Hold the pieces in place with a single safety-pin until you are ready to work round them, when they can be pinned as for larger pieces.

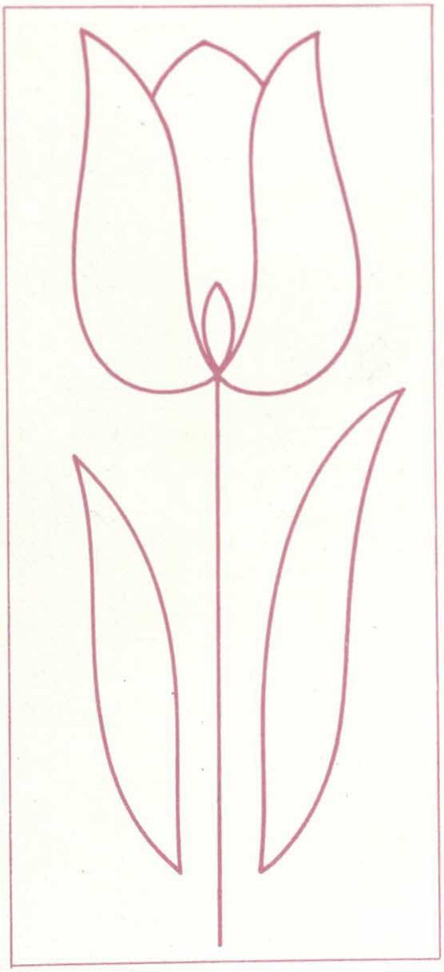
Small shapes. With experience and practice, you will be able to apply small shapes without pinning. The pieces should still be arranged on the background and held with a safety-pin before you begin stitching.

☐ Frame the fabric and work round one shape at a time, lifting the edge of any other shape that overlaps. Start stitching down the right-hand edge of the shape, keeping the piece as taut as possible by pulling on the fabric just ahead of the needle.

☐ Rotate the frame as necessary and stitch the remaining edges in the same way.

If you find the piece puckers when you take the fabric out of the frame, you can rectify it by slitting the background fabric underneath it so that it gives with the piece. Alternatively you can reframe the fabric and work decorative stitching over the piece.

Shadow effects are made by applying coloured shapes to wrong side of organdie. Design by Elna Sewing Studio.


Trevor Lawrence

Trace pattern for motif applied in organdie on the cloth shown opposite.

Fine fabrics

With a little experience it is possible to frame and successfully machine-embroider fine open fabrics such as organdie, chiffon and net. The embroidery gives a completely different effect to that given on closely woven, heavier fabrics because with open fabrics both the upper and bobbin threads are visible, making the stitching appear heavier.

Framing. Take great care when framing fine fabrics because the tension necessary for good results could easily cause splitting. To avoid this, adjust the frame until it is just tight enough to grip the fabric. Then gently pull up the fabric by gripping it along the width of both palms, so the strain is spread as evenly as possible. This needs great patience but, if you pull the fabric between the thumbs and forefingers in the usual way, the fabric will almost certainly split.

Stitching. Always use straight stitching on fine fabrics. Swing-needle stitches tend to pull up the fabric so that it is not possible to press it flat, and they may also dislodge some of the fabric threads and spoil the effect of the stitching.

Cotton organdie is an attractive fabric to machine-embroider but, as it creases easily, it is best used in a design where it will be covered in embroidery to give it body.

Subtle shadow effects may be obtained by applying pieces of contrasting organdie or light-coloured fabric to the wrong side of organdie, as shown on the table-cloth in the photograph.

Net. All weights of net can be machine-embroidered, from the heavy net used for ballet tutus to a fine dress net. The net can be used as a background for other appliquéd fine fabrics such as organdie or chiffon, or embroidery can be worked on the net which can then be cut out and applied to or inserted into another fabric. This looks particularly attractive if the net is used in layers, perhaps of different colours.

Appliquéd yarns

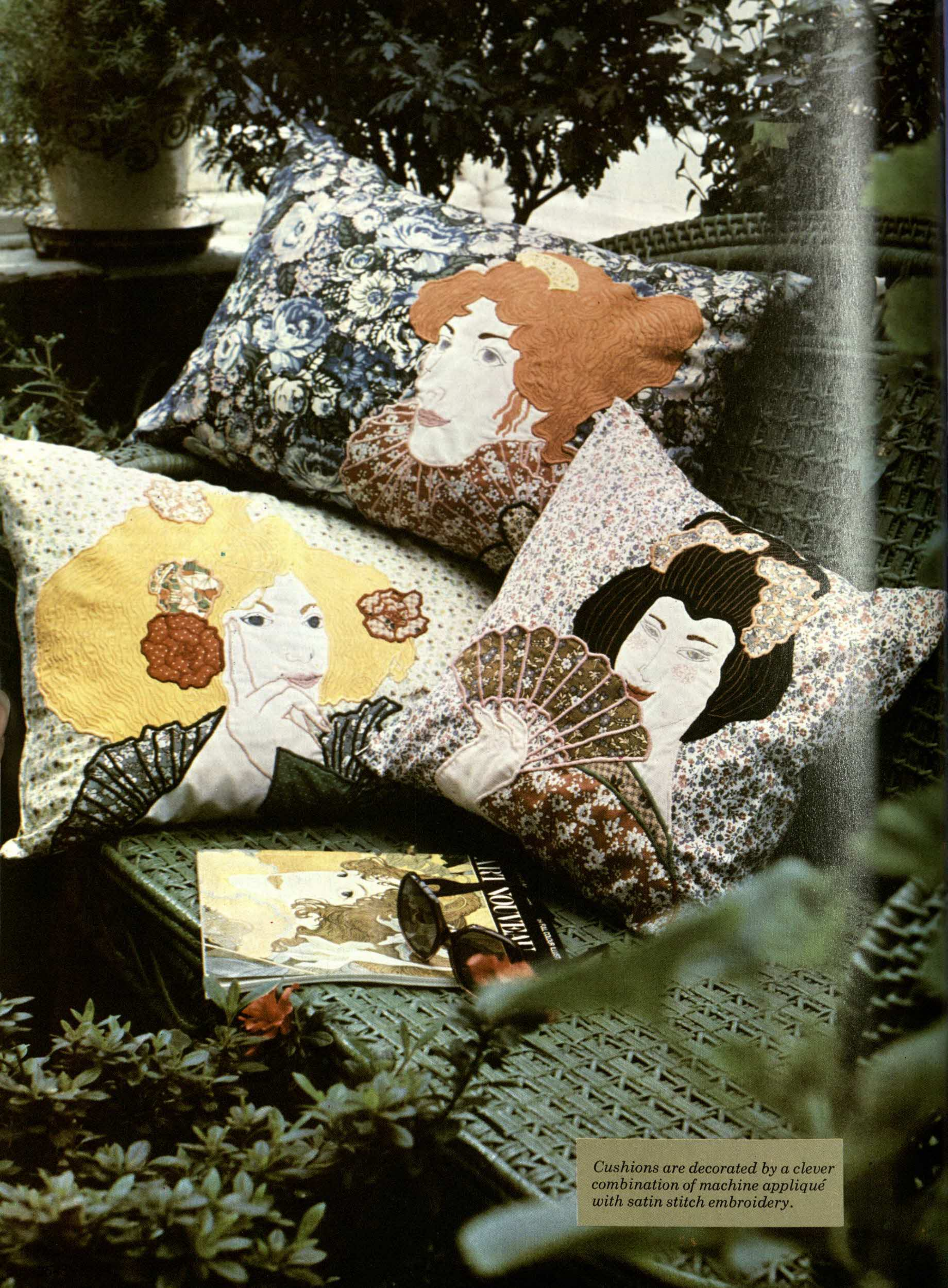
Different thicknesses of yarn, such as wool and other soft threads, can be appliquéd with free stitching on to framed fabric. (Embroidery chapter 16, page 1994, describes how to appliqué yarn by straight stitching.)

Because of the extra ease of movement with free stitching, the yarn may be laid flat, stitched into shapes or twisted and laid on top of itself. If the yarn is soft, the needle will pass through several layers. You could even try knotting or plaiting strands for variety.

Use 50 machine embroidery cotton in a matching colour and stitch along the centre of the yarn rather than across it so the stitches sink into the yarn and are almost invisible. Avoid using zigzag stitch because this spoils the texture.

Although it is best to create the design as you work, you may find it easier to lay all the threads in position on the background fabric and pin them securely first. Both hands are then free to guide the frame—the pins should be removed as they near the needle.

Generally there is no need to take the ends of the yarn through to the wrong side of the fabric—a few stitches worked diagonally across the ends will secure them.



Cushions are decorated by a clever combination of machine appliqué with satin stitch embroidery.

Creative ideas 91

Tapestry plant pot holder
First work a piece of needlepoint in vertical strips of different stitches so that it measures 18cm x 72cm (7″x 28″) when complete. Then make an acrylic double-sided holder in which to fit the canvas and you will have an unusual and attractive plant pot holder.

For a combination of colours similar to those in the photograph use tapestry or crewel wool in brown, mushroom, white and five shades of blue. Alternatively use scraps of wool. Work on single canvas 16 threads per 2.5cm (1″) with a tapestry needle size 18.

Decide which stitches you wish to include in your designs (this is a good opportunity to try new stitches). Introduce the zigzag and flame patterns of Florentine needlepoint; or satin stitch, half cross stitch and cross stitch to achieve stripes, plaits, chains, Greek key and checked effects. Needlepoint chapter 2, page 62 explains the technique of Florentine needlepoint, including the best way to obtain symmetry at the designing stage, whilst chapter 3, page 120 covers satin stitch; chapter 4, page 544 half cross stitch; and chapter 5, page 568 cross stitch.

Plot each vertical strip on graph paper so that each line on the paper corresponds to one canvas thread. Use symbols and letters or felt-tipped pens to indicate colours on the chart.

Vary tones of one colour or intersperse these with white or a different colour to produce both shaded and contrasting patterns.

Work a border of long-legged cross stitch over two threads to complete needlepoint. (Needlepoint chapter 8, page 1760 includes long-legged cross stitch.) This will keep the canvas in shape.

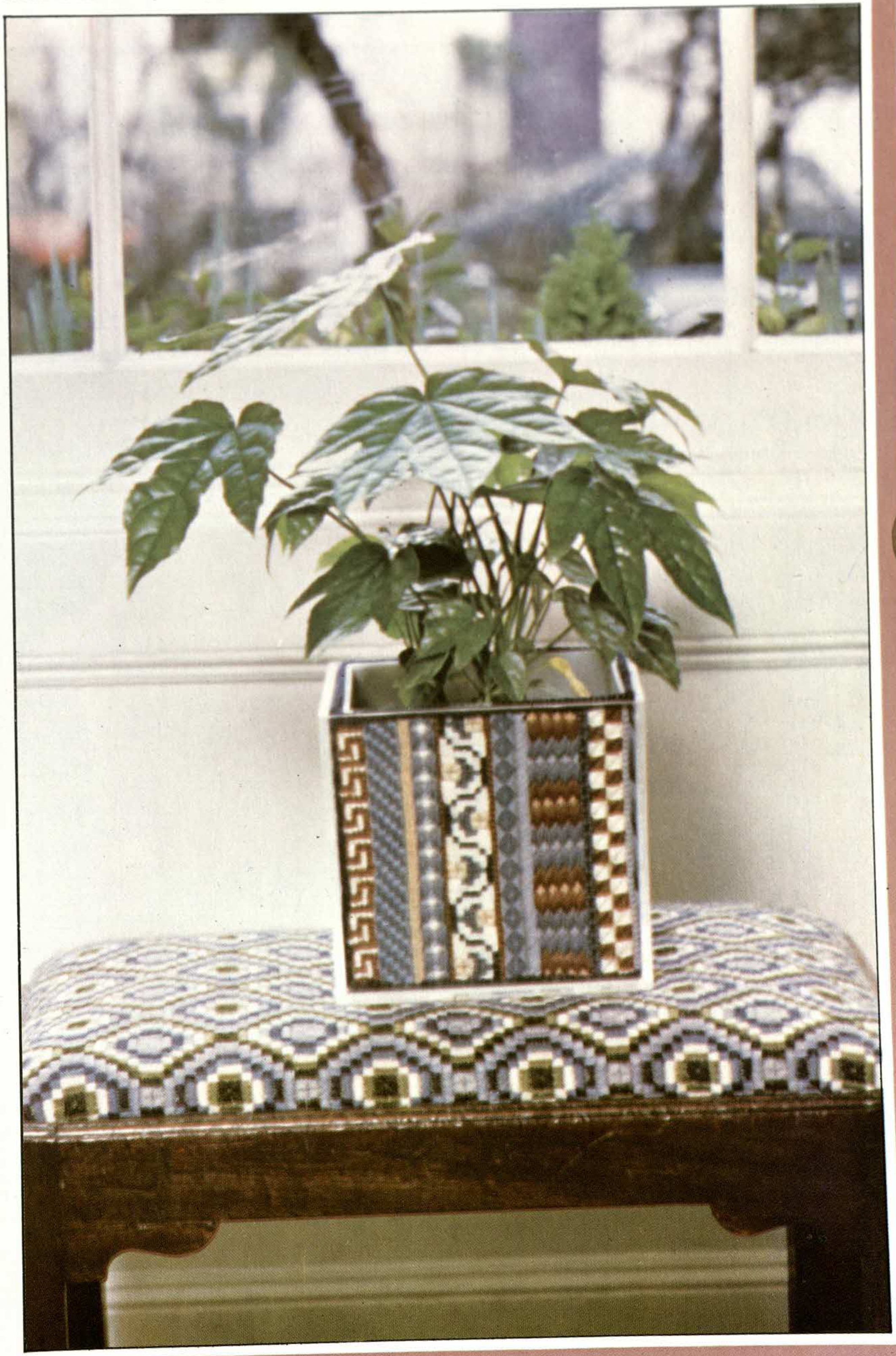
Press, trim and turn the canvas edges under (see Needlepoint chapter 2).

Neatly join the canvas ends together.

To make the double-sided acrylic holder use 3mm (⅛″) thick acrylic sheet throughout. You will need four pieces of clear acrylic 18cm x 18.6cm (7″x 7¼″) for the outer sides, four pieces of opaque acrylic 18cm x 16.8cm (7″x 6½″) for inner sides and one piece of opaque 18.9cm (7⅜″) square for the base. (The opaque acrylic will hide the wrong side of the canvas.)

Following instructions in Plastics chapter 21, page 1640 prepare and construct the holder. Build the inner sides on to the base first and then the outer sides so there is a 6mm (¼″) gap between the two for the canvas.

Design by Mardie Gorman Needlepoint School.

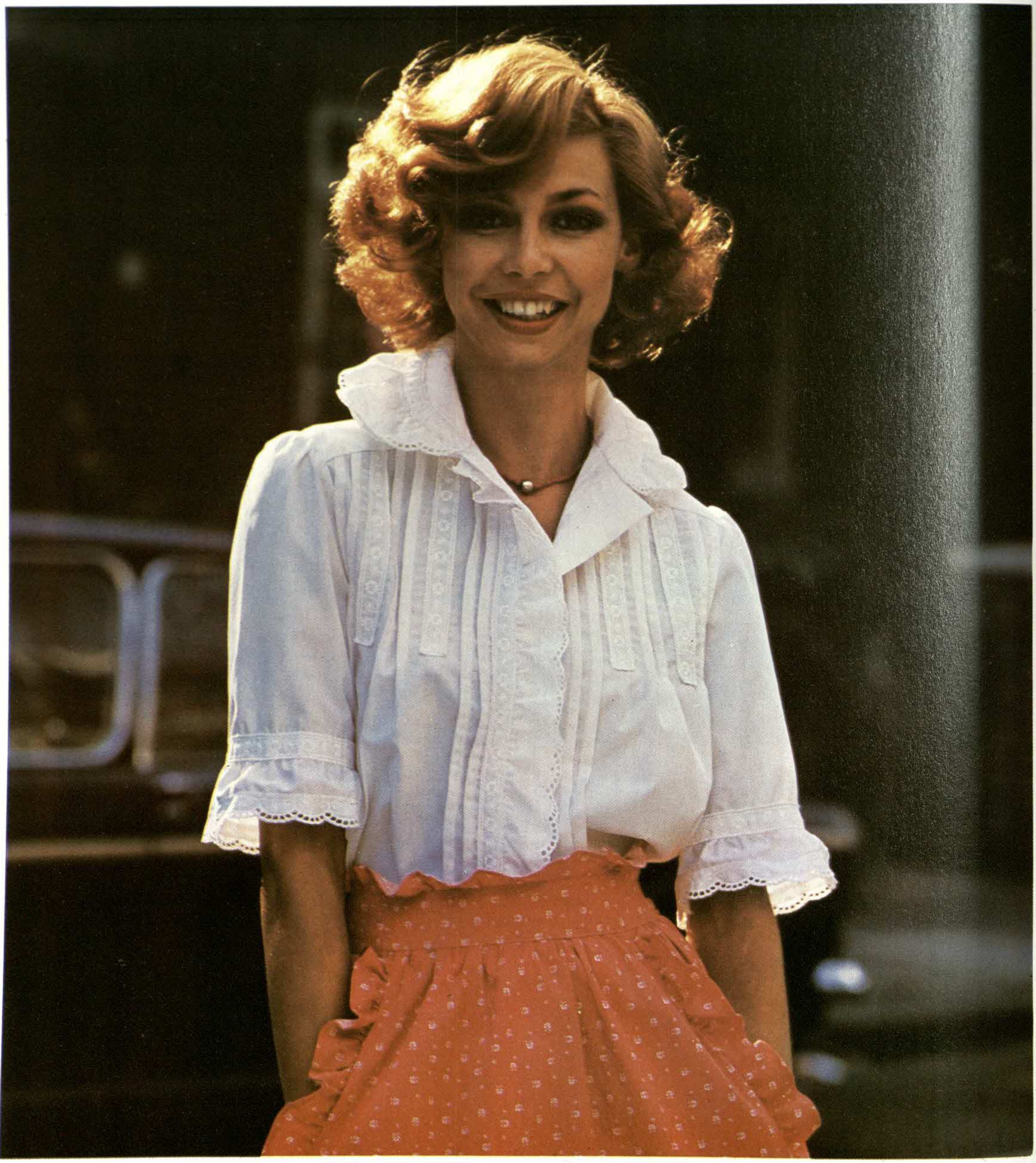


Jerry Tubby

Decorative machine finishes

Cloth — sewing 28

This chapter describes some of the sewing-machine attachments which can be used to simplify the making of such decorative finishes as gathering and binding. Both these processes, as



The tucks and flounces on this blouse were made with special feet on a sewing machine. The blouse was cut from Butterick pattern 4490, which was adapted to give fullness for the tucks.

Steve Campbell

Using the multiple cording foot to make a colourful braid from pearl embroidery cotton. The caftan shown overleaf is decorated with this braid.

Ray Duns

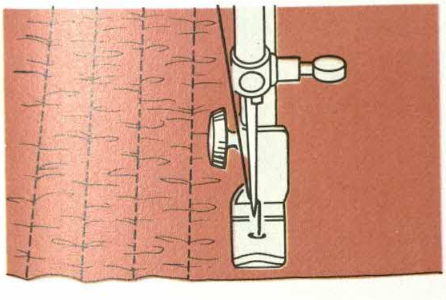
well as pleating and pin-tucking, usually take lengthy preparation by hand if worked by traditional sewing methods. The sewing-machine attachments produce similar results but (with practice) these are produced more easily and speedily.

Special feet

Most of the attachments take the form of special feet which are fitted to the machine in place of the normal presser foot. These special feet can usually be fitted on most makes of machine (providing they have the standard side screw), and some can be worked on all types of machine, including hand-operated straight-stitch models.

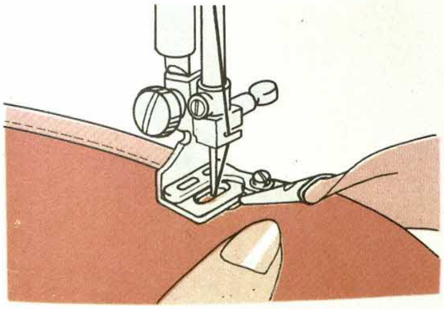
Although a few of the feet—the ruffler in particular—look intricate, with practice you will not find them difficult to use. Although they are supplied with instructions, it is always worth asking for a demonstration when you buy them.

Gatherer. This is a simple foot which pulls the fabric into gathers as you stitch (fig.1). The amount of fullness is controlled by the stitch length and degree of tension—a long stitch produces more fullness than a short stitch.



1. *Gatherer foot for quick shirring.*

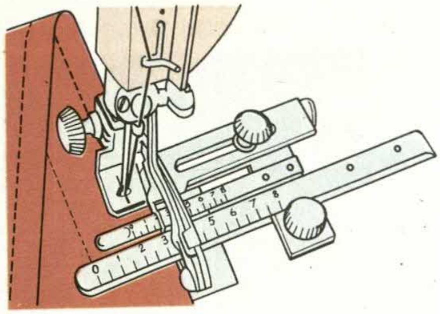
Binder. This attachment folds under raw edges of bindings and guides bindings of all kinds of fabric while they are stitched on both sides (fig.2), so there is no need for preliminary tacking. It is easiest to use on straight edges but, with adjustment, the binder also works round curves, on plackets and bound buttonholes. Military braid, which does not need folded edges, can also be applied neatly with the binder.



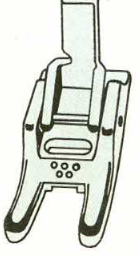
2. *Binder stitches both edges at once.*

Tucker. This gadget makes tucks, without preliminary tacking or marking. Tucks can be of any width from a fine pin size to 2.5cm (1″). Each tuck is of uniform width and a series of tucks is evenly spaced because, while one is being stitched, the fabric is creased at the position of the next (fig.3). (Pin tucks can also be formed with twin needles described overleaf.)

Multiple cording foot (fig.4) can be used to produce an attractive, simple trimming. Up to five lengths of yarn can be fed together through the foot which holds them flat and untwisted while they are stitched in position on the background fabric.

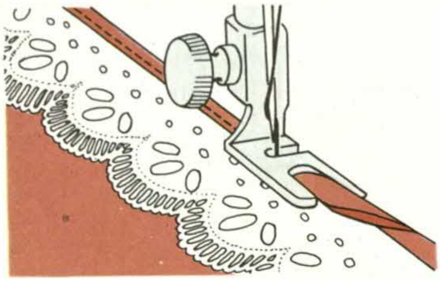


3. *Tucker makes tucks of numerous sizes.*



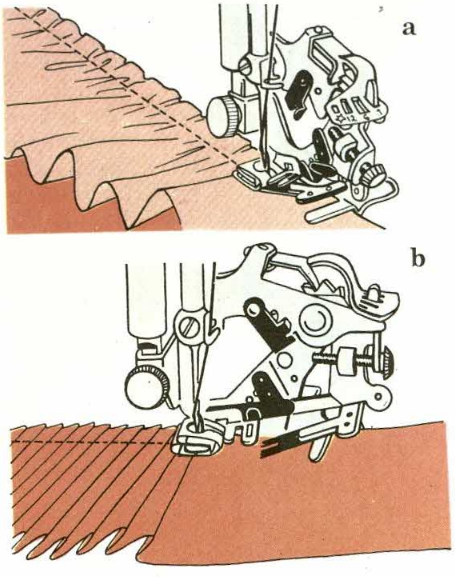
4. *Cording foot makes braids.*

Hemmer foot. This enables narrow double hems to be stitched without preliminary folding and tacking. Lace can also be included in the hem while it is being stitched (fig.5). There are three sizes of feet available.



5. *Hemmer folds and stitches hems.*

Ruffler. Straight-forward gathering, gathering and stitching a ruffle to background fabric in one operation (fig.6a), and pleats in either a series or spaced groups (fig.6b) can all be worked automatically with this foot.



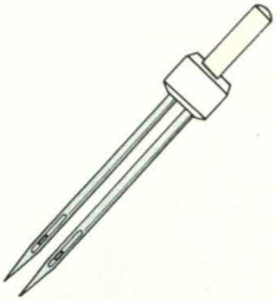
Coral Mula

6. *Ruffler can gather or pleat fabric.*

Because of its versatility it is the most complicated of the special feet to operate, but it is well worth the effort if, for example, you are making a flounced bedspread or a multi-flounced skirt.

Twin needles

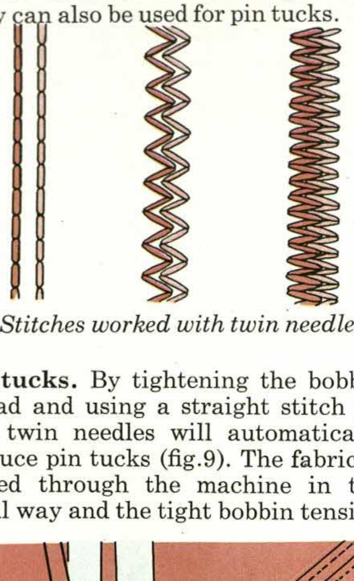
These can be used only on automatic swing-needle machines. The needles are in two sizes—either 2mm or 2.7mm apart—and have a joint shank for fitting to the machine (fig.7).



7. *Twin needles have a joint shank.*

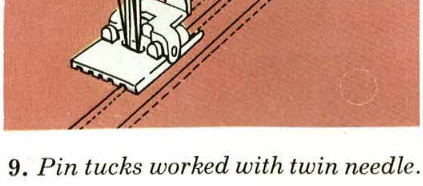
Two reels of thread are used on top of the machine—one for each needle—but only one bobbin is needed because the thread zigzags between the two top threads.

Twin needles can produce double lines of straight or zigzag stitching (fig.8) and be used for automatic patterns. They can also be used for pin tucks.



8. *Stitches worked with twin needle.*

Pin tucks. By tightening the bobbin thread and using a straight stitch on top, twin needles will automatically produce pin tucks (fig.9). The fabric is passed through the machine in the usual way and the tight bobbin tension causes the fabric enclosed in the stitching to make a tiny ridge which forms the pin tuck. Pin tucking should be worked before cutting out so you do not need a special dress pattern.

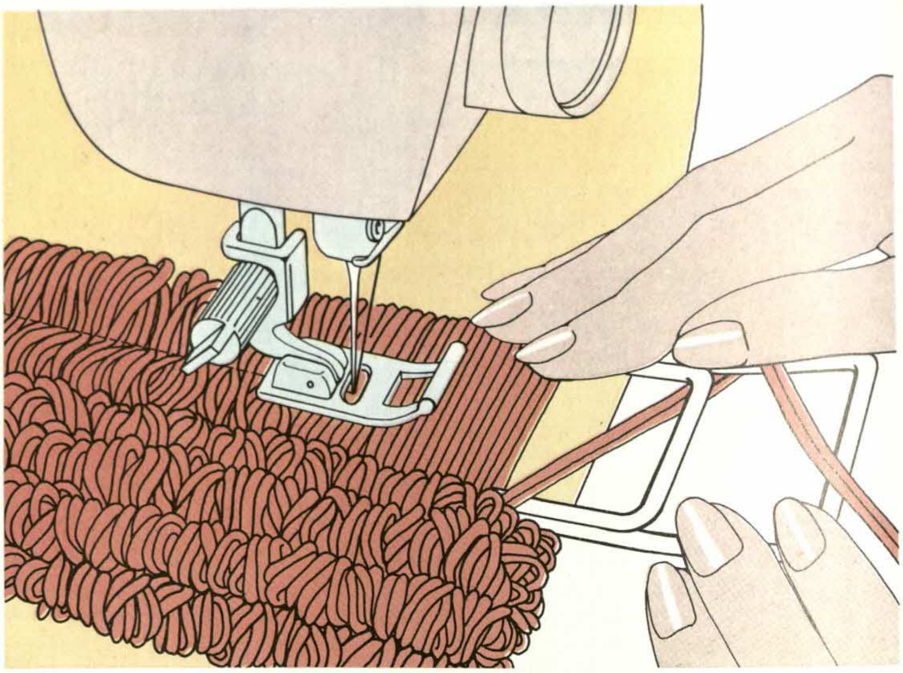


Coral Mula

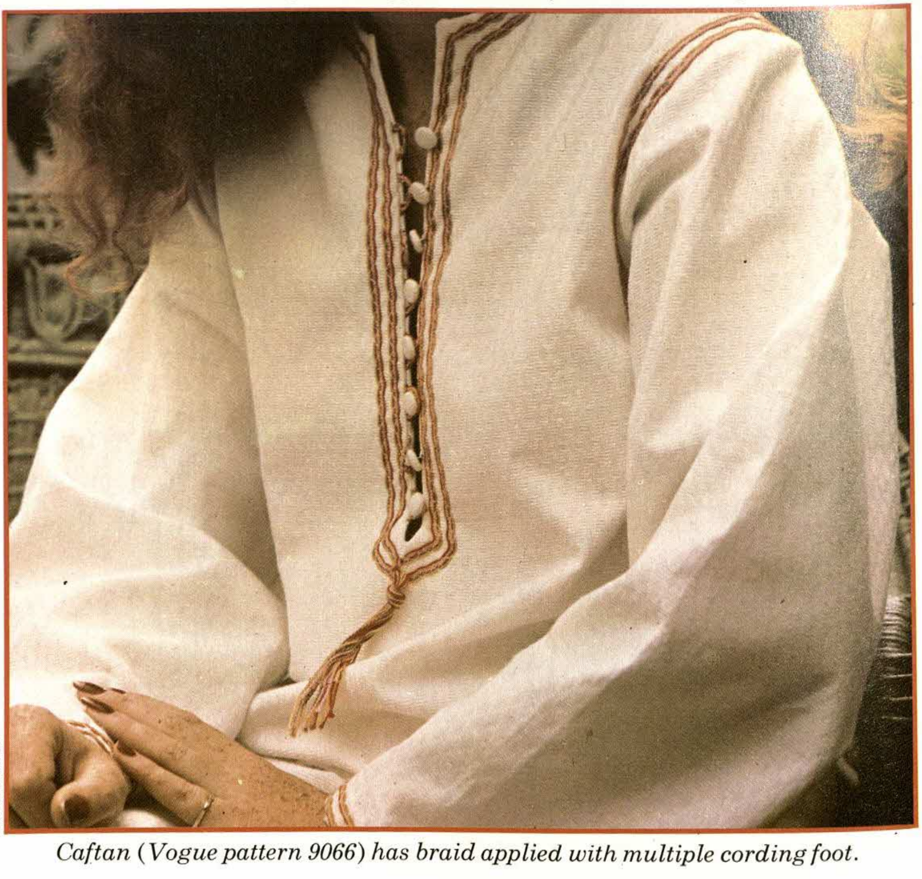
9. *Pin tucks worked with twin needle.*

Carpet fork

By winding yarn round this fork (fig.10), and then stitching along the middle of the loops over a background fabric you can make pile for rugs, carpets and trimmings quickly and economically. The resulting pile may be cut or left in loops. The carpet fork is easiest to use with either a no-snag foot or a blind stitch foot (see fig.10) because the prongs of the normal presser foot tend to catch in the yarn.

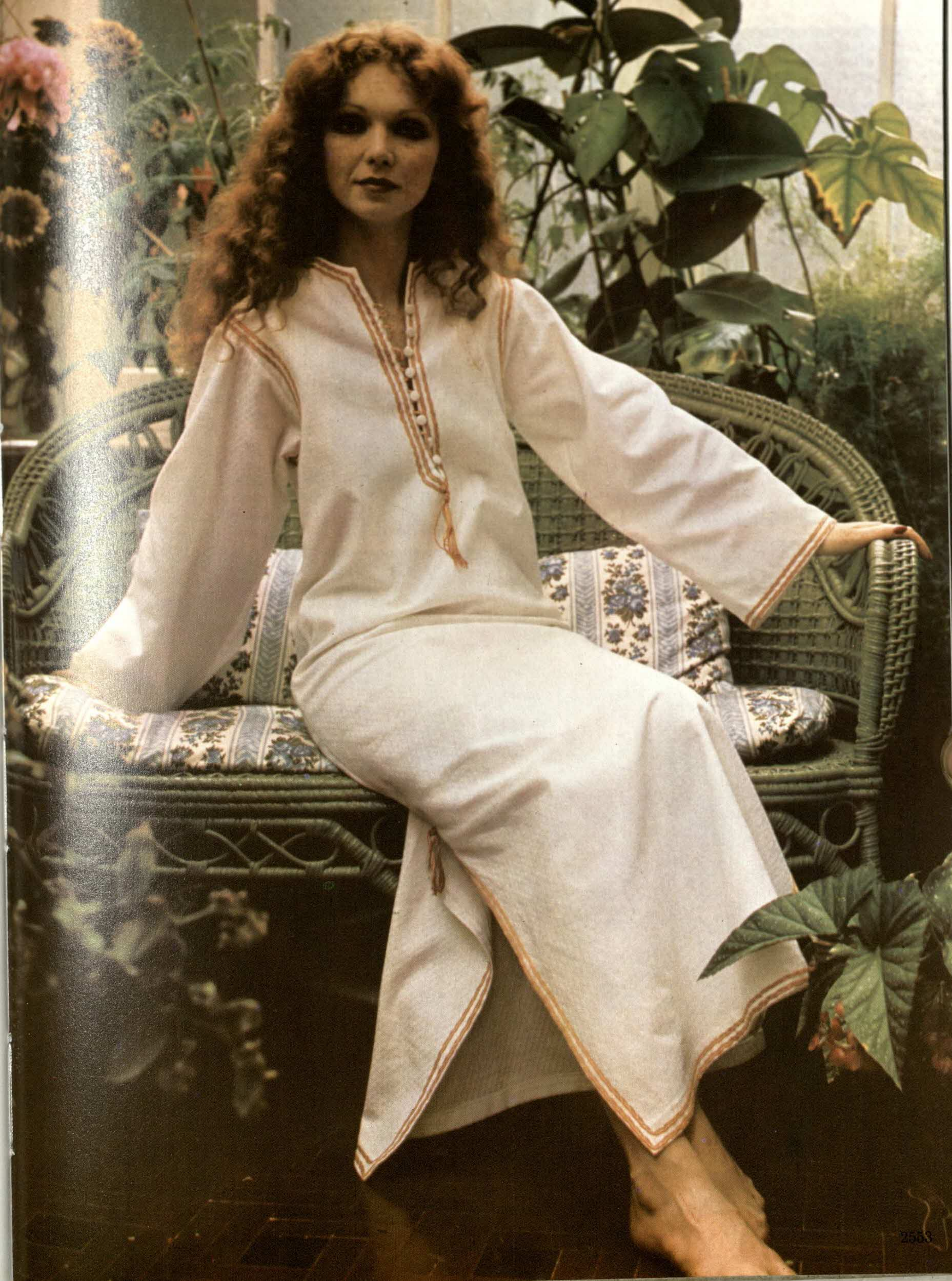


10. *Pile texture made by winding yarn round a fork and stitching over loops.*



Geoff Howes

Caftan (Vogue pattern 9066) has braid applied with multiple cording foot.



Making pictures with shells

Shellcraft 4

Making shell pictures was a favourite pastime among genteel ladies of the 18th and 19th centuries. These ladies of leisure would obtain shells without having to set foot on a beach: they bought them from shell shops which could be found in all fashionable districts.

It is surprising how few original examples remain of this once popular craft, but it is possible to copy the style of the examples which have survived, and also to make interesting shell pictures in a completely modern style. Both are ways of reviving the craft, to make intriguing and unique works which are also great fun to create.

Sailors' valentines

Shell pictures of the 19th century, known as 'sailors' valentines', were once thought to be the work of sailors themselves, made during their long voyages and taken home as gifts to their loved ones. However, it is now thought more likely that they were ready-made presents which they bought in ports in the West Indies, since all the shells on the original pictures, and the wood from which the frames were made, are from the West Indies. (Barbados was an important shipping centre for American, Dutch and British ships in the 18th and 19th centuries.)

These valentine pictures were enclosed in a frame which was often octagonal, hinged to a shallow box in which the shells were arranged. The frame could then be closed over the box without pressing on the shells and damaging them.

The shells were arranged in formal, intricate patterns and many included a heart or a loving motto worked with the shells in the middle of the pattern.

If you wish to make a picture similar to the octagonal one shown, first choose a frame: it is easier to make a design fit a particular frame than to find a frame which will be the right size and shape for a finished design.

The most attractive frame for a shell picture is one made of bird's eye maple. Such frames were very popular during the 19th century for framing samplers, embroidery and prints and it is still quite easy to find them in junk shops and markets. If you are unable to buy such a frame you could make one or have one made.

Whatever the shape of the frame you intend to use, if it is not deep enough to hold the shells, or has no box-like extension on the back of the frame, it will be necessary to make one.

You will need:

A length of wood cut to fit each side of the back of the rebate of the frame, about 5mm ($\frac{1}{4}''$) wide and 25mm-40mm ($1''$-$1\frac{1}{2}''$) deep.

Small nails.

Piece of hardboard to fit the frame.

Compasses, ruler, pencil.

Plaster of Paris and coarse and fine grade glasspaper (optional).

PVA glue such as Evo-stik wood adhesive.

Size, poster paints, brushes (if you wish to paint the hardboard before attaching the shells).

Assorted shells of different shapes and sizes.

Clear polyurethane varnish (optional).

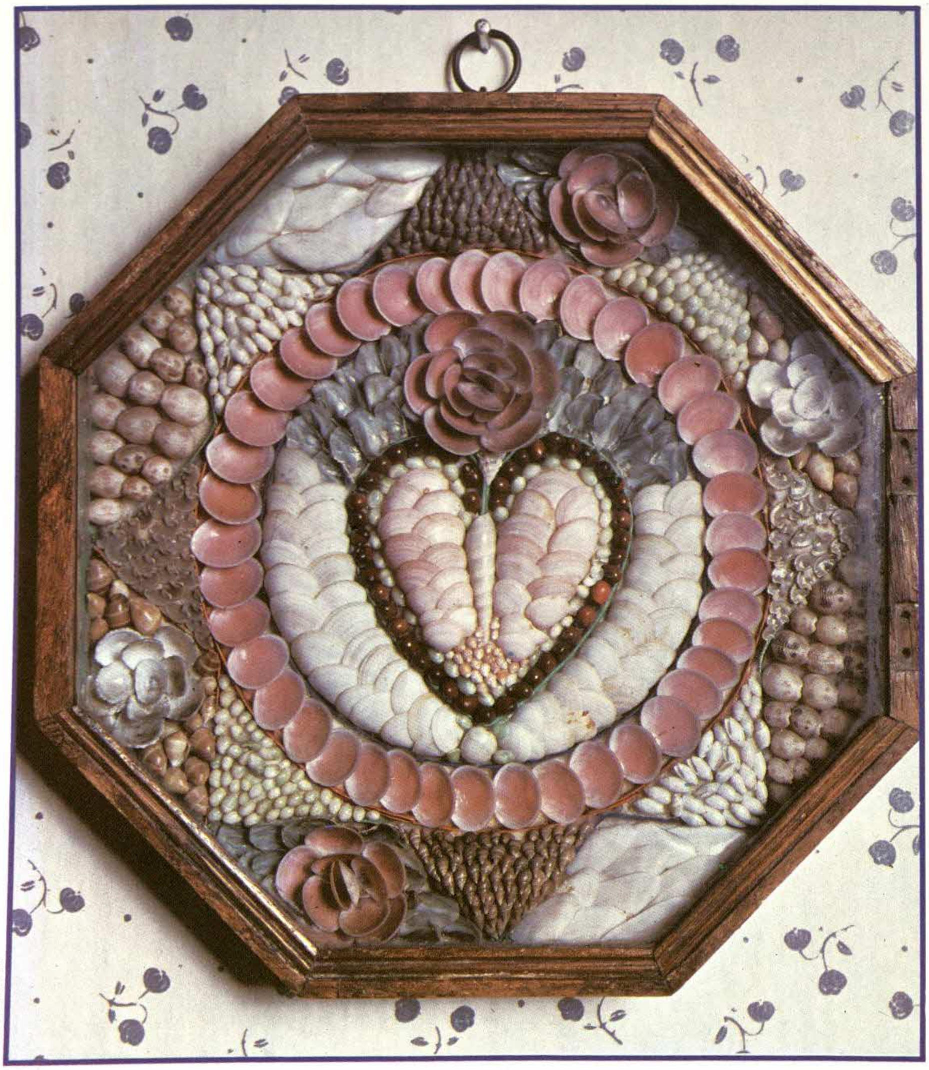
☐ Join corners of wood strips with glue or nails. Before fixing the strips of wood into place they should be covered with flock paper, stuck on with PVA adhesive.

☐ Fix the wood into the rebate with small nails.

☐ Cut the hardboard to fit the back of this extension, but do not attach it until the design is complete.

☐ Map out a pattern on the hardboard with a pair of compasses and a ruler, for exactness. Leave a 5mm ($\frac{1}{4}''$) border round the edge of the hardboard.

If you wish to give a three-dimensional quality to a section of the pattern



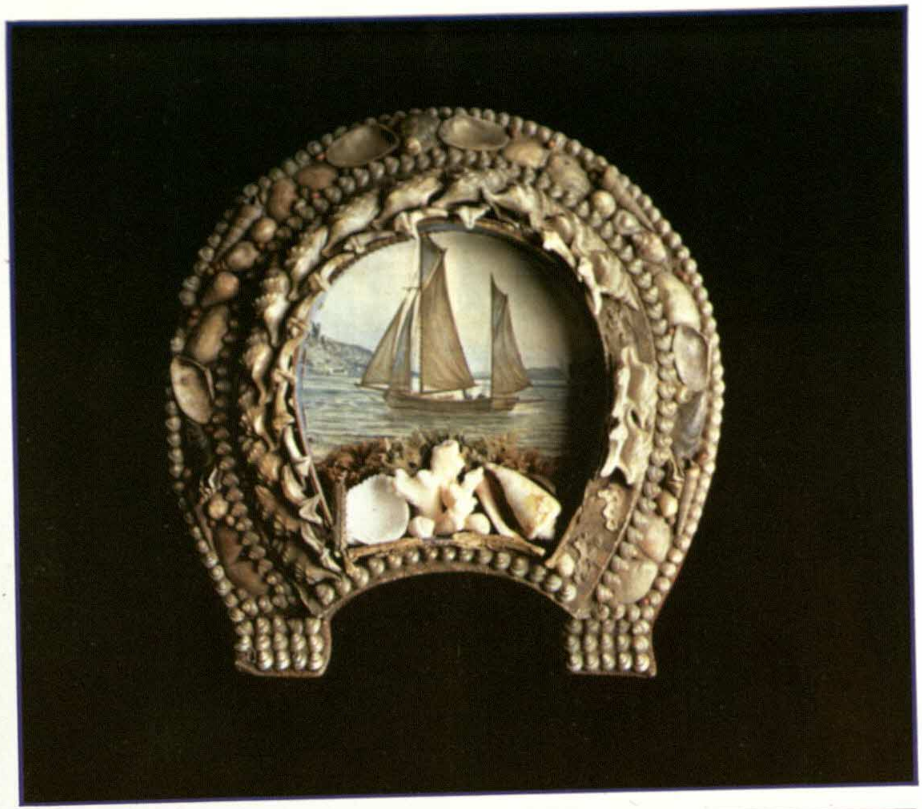
Chris Holland

Shells are arranged in symmetrical patterns to make up this subtly coloured sailor's valentine, which was probably made in the West Indies and brought home as a gift for a wife or sweetheart.

without using very large shells, make a mound on the hardboard with plaster of Paris and, when dry smooth it down with coarse and then fine glasspaper.

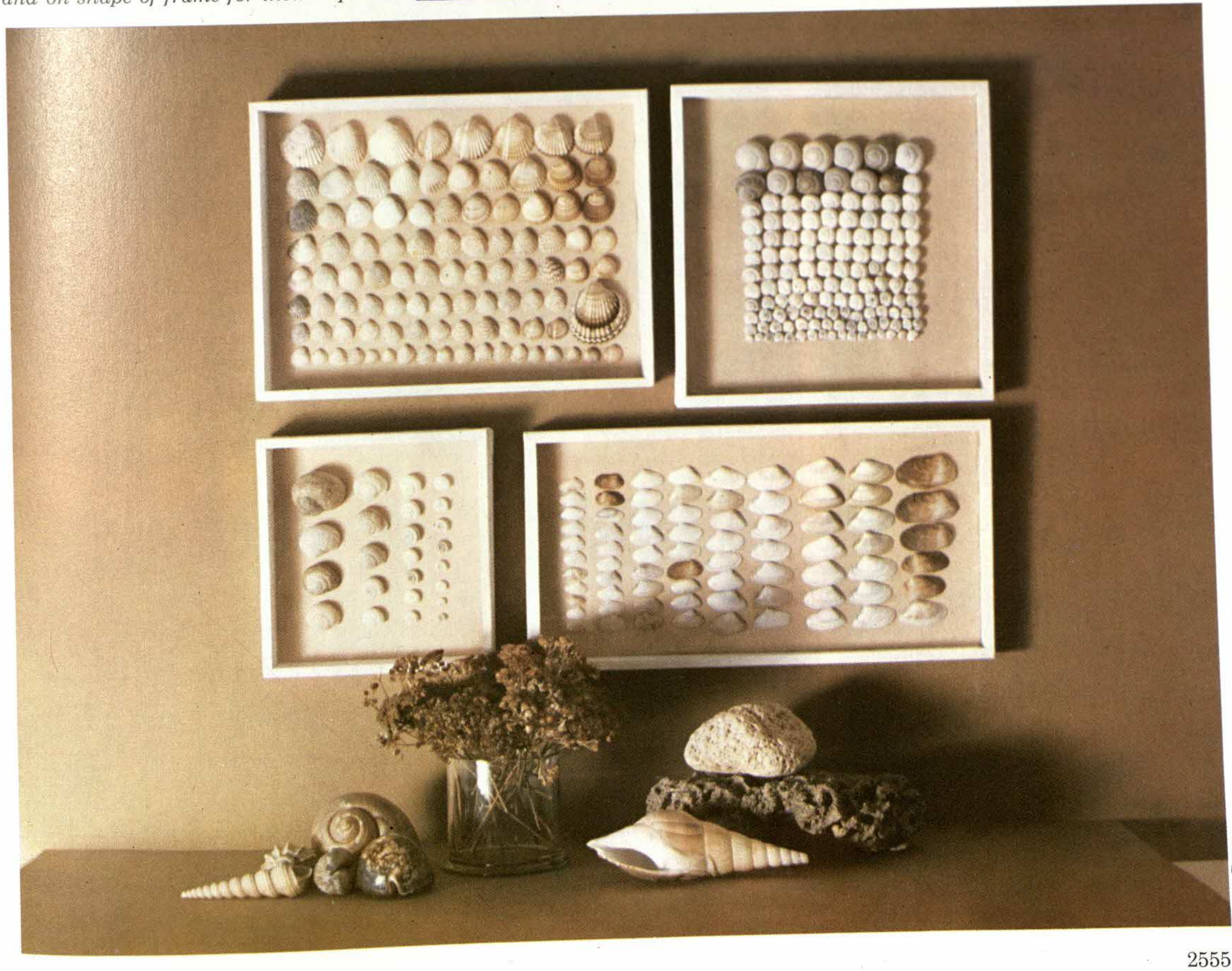
☐ If you intend to make a shell design which does not cover the whole of the hardboard, size the hardboard to seal it and paint it a suitable colour. (If you wish to paint a picture to be surrounded by shells, similar to the horseshoe-shaped picture shown, it will also be necessary to size the hardboard first. To cover the frame with shells as shown, see Shellcraft chapter 2, page 2258 for instructions.)

☐ Stick the shells down on the hardboard with PVA glue, starting with the central section and working towards the edges.



Note how the lower part of the shell frame on this sea-scape is cleverly adapted to make a three-dimensional shore line of shells and coral.

Below: formal arrangements of shells can look as effective as those grouped in patterns. These simple shell pictures depend on gradations of size of shell and on shape of frame for their impact.



Camera Press

Creating a shell picture

Small shells can be mounted on stiff card covered with felt, velvet or flock paper as a backing. Large shells should be mounted on stiff board, which can be painted or covered in fabric or paper as required.

If shells are to be permanently preserved, they must be framed behind glass, which means that the frame must be recessed to allow glass to go on top. Shells can also be set in cement filler such as Polyfilla, which can be tinted with coloured emulsion paint at the same time as the water is added.

With this method, you must plan your design down to the last detail beforehand, as the cement sets quickly. When shells are set in cement filler, instead of putting them behind glass, they can be protected by pouring a layer of clear embedding resin over them. However, this must be inside a temporary or permanent wall high enough to contain the liquid resin.

You will need:

A large assortment of shells.
Hardboard.
Clear adhesive, such as UHU.
Epoxy adhesive such as Araldite.
A recessed frame to fit the hardboard.
Piece of glass to fit the frame.
Acrylic paint (for background).

☐ Paint the smooth side of the hardboard the required colour.

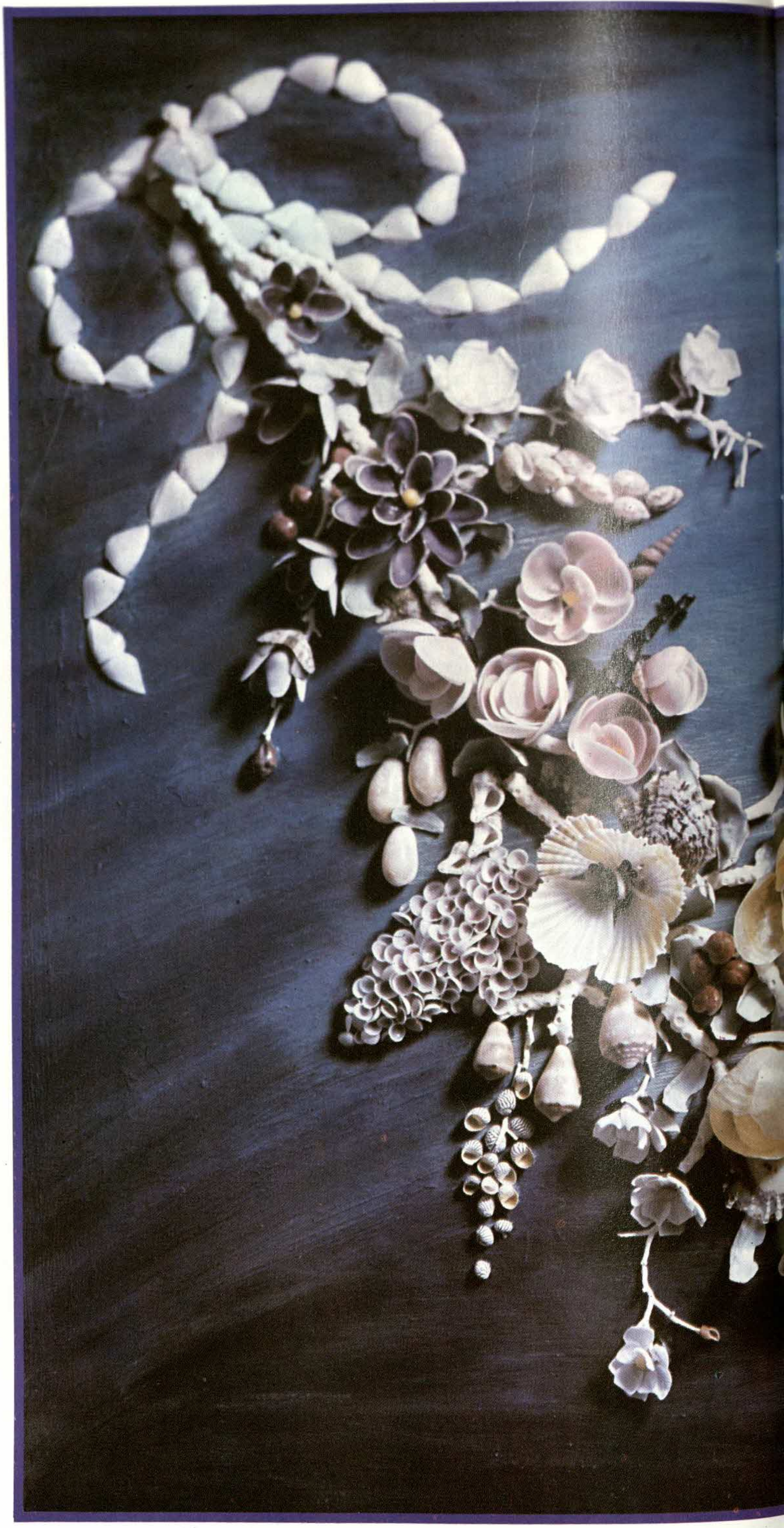
☐ Some people may be able to work straight on to the coloured board, but for beginners it is better to make a trial design first, on a separate piece of board, so that you can transfer it to the coloured board later, shell by shell. Never draw on the painted board, but use cut-out paper drawings if necessary, and move them around until the design is satisfactory.

The picture illustrated is based on an adaptation of a Grinling Gibbons carving, but for a less ambitious project, look for suitable motifs on carpets, pictures or in museums.

☐ Make up some large flowers using small shells for petals and sticking them around the larger shells with clear adhesive. Different types of shell lend themselves to different types of flower. Coral forms naturalistic looking stems—dog whelks make grapes, small scallops make petals, and so on.

☐ When you have enough flowers, and you are satisfied with your trial design, stick the shells down on the coloured board with clear adhesive, unless the shells are very heavy, in which case use epoxy adhesive.

Frame behind glass.



Delicately tinted floral garland made entirely of shells and applied to a painted background was inspired by a Grinling Gibbons wood carving and reinterpreted by Lady Gascoigne.

Syndication International

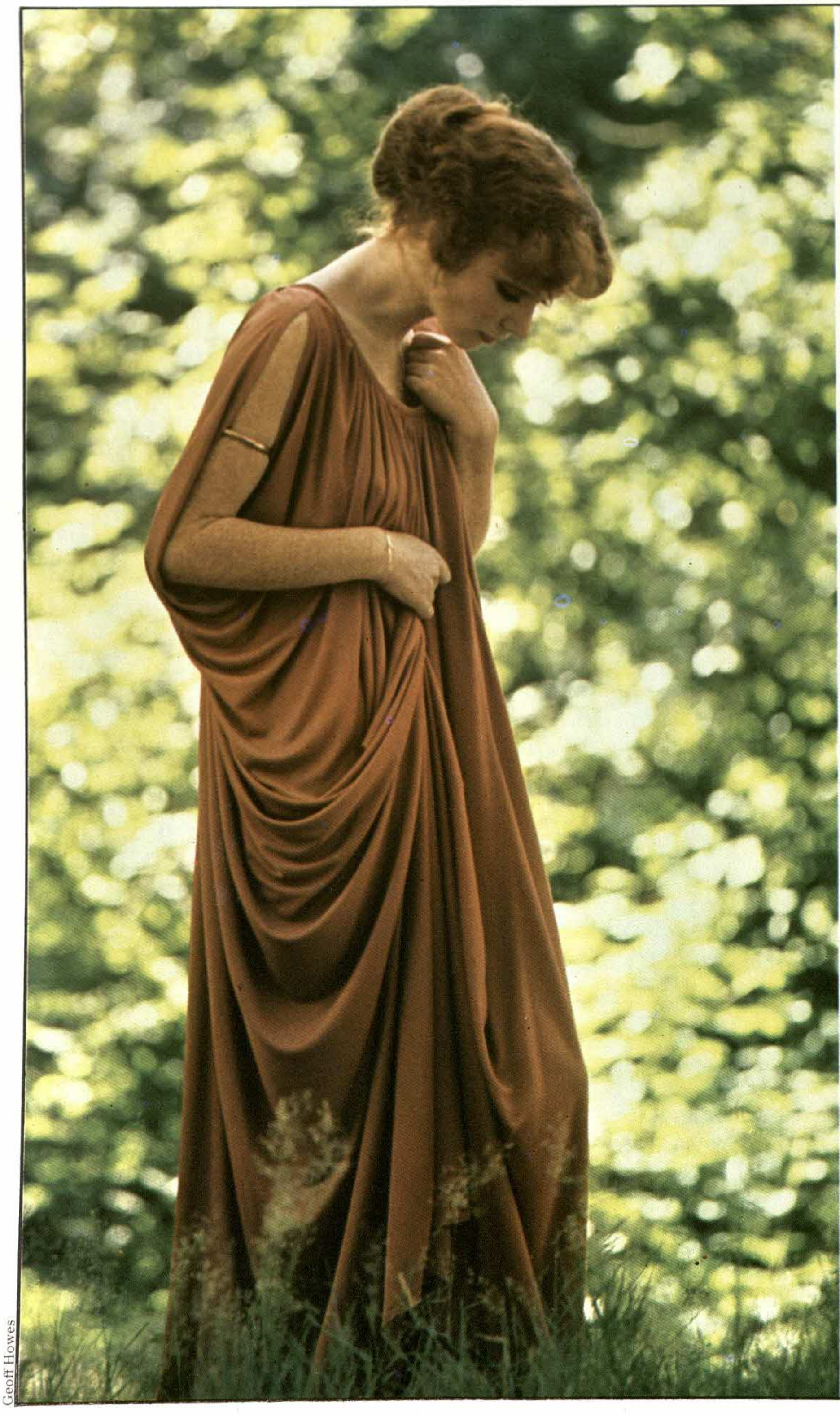
Grecian-style evening dress

Cloth — sewing 29

This Grecian-style evening dress, with its fluid lines, has a feminine and elegant simplicity. The main feature of the dress is that it has no side seams—this causes it to fall in flowing folds at the sides.

A graph pattern is given overleaf for the dress. The pattern is based on a tube shape, and is extremely easy to make up.

The style is so loose fitting that the



Geoff Howes

pattern can be regarded as multi-sized. The finished length of the dress, from shoulder to hem, is 152cm (60″), but you can easily lengthen or shorten the pattern if necessary. Lines for such alteration are marked on the graph pattern.

The dress is made in a matt rayon jersey fabric which is particularly soft, supple and thus suited to this flowing style. It is advisable to use a narrow zigzag stitch for seaming, since the elasticity of zigzag stitching is particularly suited to jersey fabric.

The pattern

The graph pattern given for the dress includes a seam allowance of 1.5cm (⅝″) except on the neck edges which are bound. A 3cm (1¼″) hem is also included.

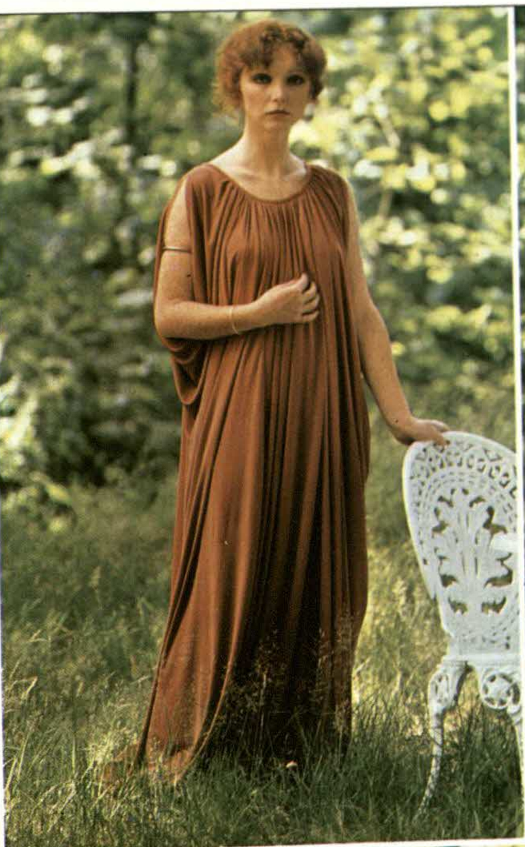
You will need:

Graph paper and pencil.

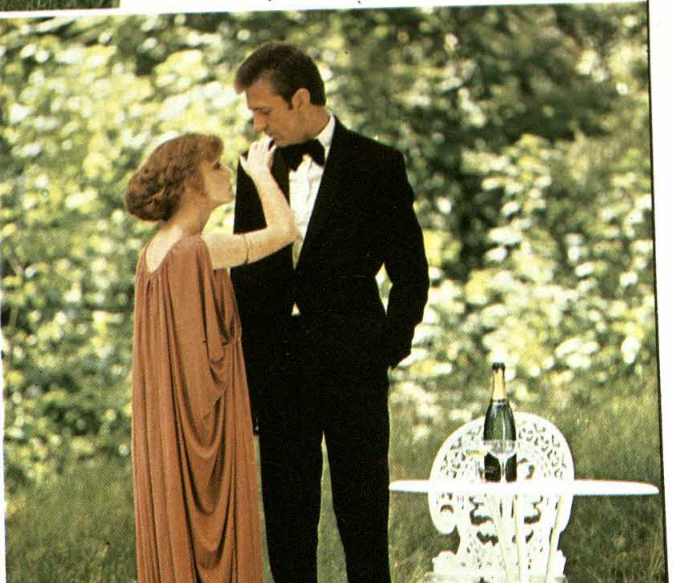
Large sheets of paper (optional).

☐ Make patterns for the two main dress sections, back and front panels and neck facing, using the graph.

☐ If you wish to lengthen the pattern, cut along the lines indicated for altering the length on the two main sections, and back and front panels. Open out the patterns by the extra length required and stick pieces of paper at the back of the patterns.



Things happen in this feminine Grecian gown. Its flowing draperies change gracefully with every movement, making an eye-catching attraction which can turn even a casual stroll into a romantic occasion.



Connect up the cutting lines with a pencil, and cut the new pieces of pattern along these cutting lines.
If you wish to shorten the pattern, fold along the lines indicated for altering the length by the required amount and stick in place.

The dress

You will need:

4.7m (5⅛yd) of 125cm (50″) wide jersey fabric for a dress 152cm (60″) in length. To calculate fabric requirements if using fabric of a different width or for a dress of a different length, work out a cutting layout (see Sewing chapter 8, page 684).
38cm x 38cm (15″x 15″) fine matching fabric such as organdie for the interfacing.
Matching thread suitable for sewing jersey fabric such as silk or synthetic thread.
Contrasting tacking thread.
17cm (7″) straight binding tape.
Metre (yard) stick (optional).

Cutting out

☐ Position the pattern pieces on the jersey fabric as indicated on the cutting layout below, or following your own cutting layout.

☐ Cut out all the pattern pieces.

☐ Also cut a strip of fabric, 82cm (32½″) by 3cm (1¼″) for the neck binding. (This includes a 1.5cm (⅝″) seam allowance at either end, and a 7.5mm ($\frac{5}{16}$″) seam allowance along both long edges.)

Note: the elasticity of jersey fabric means that the neck binding can be cut on the straight of the grain, and will ease round the curved neck edge without difficulty. If you attempt to make the dress in a different fabric, with less 'give', the binding should be cut on the cross, and several strips joined to make up the required length if necessary.

☐ Also cut out the interfacing in matching fabric such as organdie.

☐ Mark the ends of the gathering lines, as indicated on the graph pattern, with tailor's tacks.

☐ Mark points A and B (see graph pattern) on each of the main dress sections with tailor's tacks.

☐ Also mark the side folding lines on the two main dress sections, as shown on the graph pattern, with tailor's tacks.

Making up

☐ With right sides facing, pin, tack and machine stitch the front panel to the front edges of the two main dress sections.

☐ Similarly, pin, tack and machine stitch the back panel to the back edges of the two main dress sections.
This will produce a tube shape.

☐ Press the seams open.

☐ Fold the tube along the side folding lines, following the tailor's tacks as guides.

Note: it is advisable when stitching the shoulder seams to place a strip of straight binding tape on the wrong side of one layer of fabric. This is sewn in when the seams are stitched and remains in the finished dress. It keeps the seams firm and prevents the fabric from stretching.

☐ To stitch the shoulder seams, matching point A with point B on either side of the neck opening, and with right sides facing, join back to front by stitching from points A/B to neck edge and again from points A/B to neck edge on the other side.
The remainder of the side openings is left open to form the armholes.

☐ Clip the seam allowances of the shoulder seams, about 12mm (½″) from each arm opening.

☐ To hem the arm opening, turn in 6mm (¼″) to the wrong side, and tack. Turn under a further 9mm (⅜″) to obtain a double hem, and tack.

☐ Press flat.

☐ Machine stitch with two rows of topstitching, ensuring that both rows catch the seam allowance.

☐ Run two rows of gathering thread, about 6mm (¼″) apart, round the back and front neck edges, following the tailor's tacks which mark the ends of the gathering lines as guides.

☐ With wrong sides facing, tack the neck facing to the interfacing along the neck edge.

☐ Neaten the other raw edges of the facing and interfacing as one with a machined zigzag stitch or oversew by hand.

☐ Draw up the gathering threads until entire neck measures 79cm (31¼″).

☐ With wrong sides facing, matching centre front and back of facing to centre of front and back panels, and matching shoulders, pin and tack the facing to the neck edge, spreading the gathers evenly.

☐ The neck edge must now be bound. Position one end of the neck binding so that the back seam line of the binding is level with one of the back panel seams. Leaving the seam allowance at the end free, pin the strip of fabric, right sides facing and raw edges level, to the neck edge.

☐ Tack and machine stitch the neck binding round the entire neck edge, along the first line of gathering stitches.

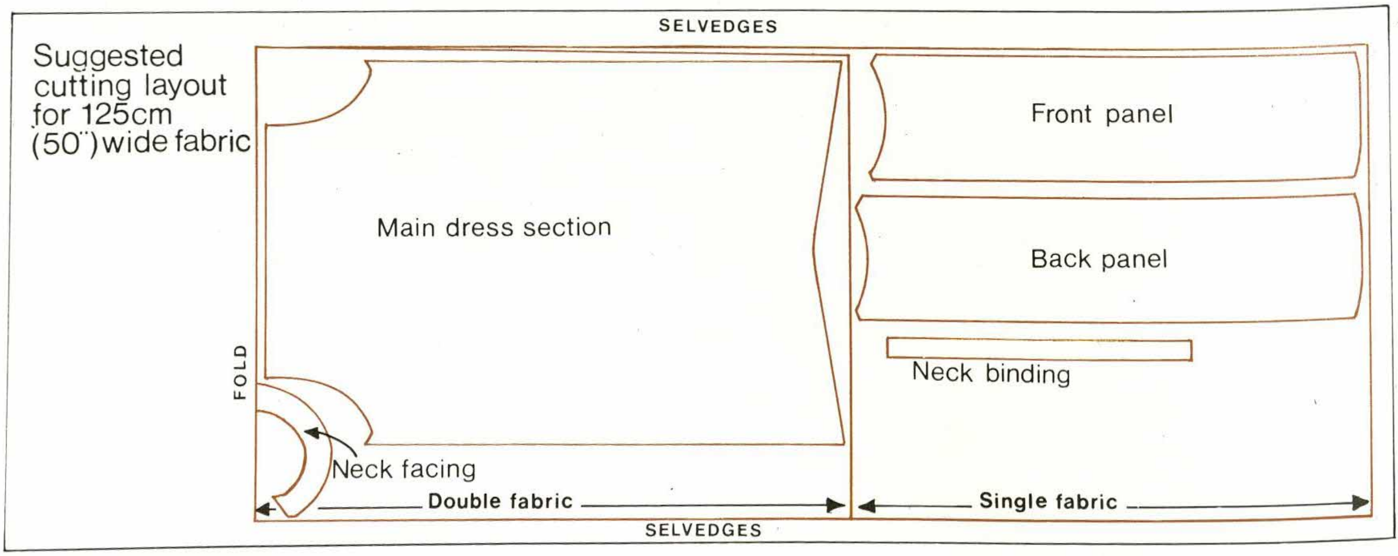
☐ Sew the back seam line of the binding by hand in back stitch and press seam open.

☐ Remove the second line of gathering stitches which is not hidden by the neck binding.

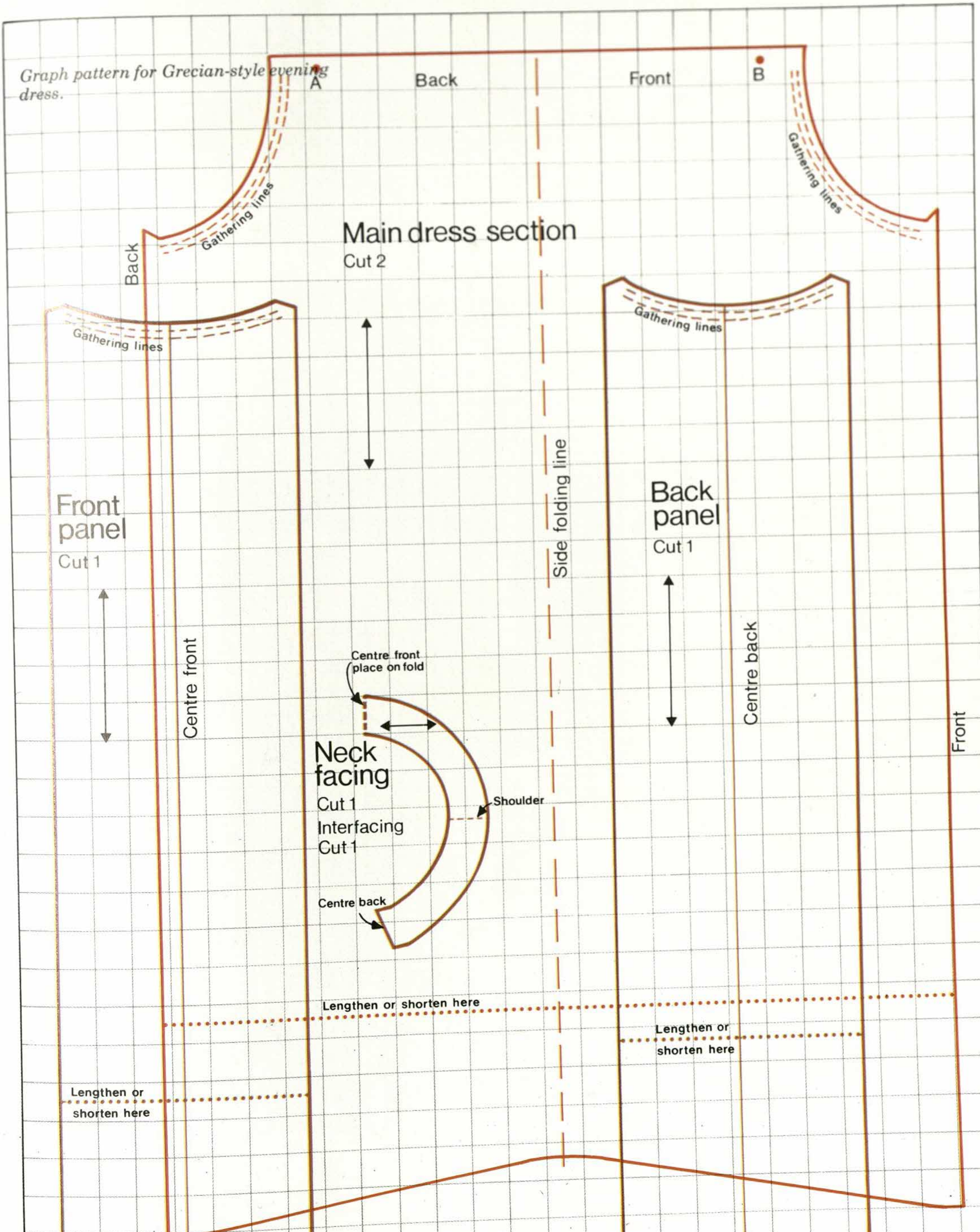
☐ Turn the neck binding over to the wrong side of the neck edge. Turn under the seam allowance of the neck binding, and slip-stitch it along stitching line on the inside of the dress.

☐ Turn up a 1.5cm (⅝″) double hem, preferably checking the length of the dress with a metre (yard) stick.

☐ Stitch the hem with two rows of topstitching to match the stitching on the arm openings.


Suggested cutting layout for 125cm (50″) wide fabric

Graph pattern for Grecian-style evening dress.



Trevor Lawrence

Introduction to marquetry

Marquetry is the art of inlaying different types of wood to create decorative patterns. The craft dates back to the days of ancient Egypt and early examples can be found in the tomb of Tutankhamun. The term marquetry is from the French word 'marqueterie' which means to variegate or to cover with patches of different colours.

Marquetry first appeared in England in the 16th century and by the end of the following century had reached a high degree of sophistication. The finest examples, however, were produced on the continent of Europe by such master craftsmen as Brulle and Riesner.

Today, the use of modern wood veneer, cut to precision-made thickness, has simplified the craft of marquetry and extended the scope of artistic expression. There are over one hundred different types of wood veneer in general use and most are available from DIY shops and timber yards. There are also a number of stores which deal exclusively in wood veneers.

It should be emphasized that marquetry requires great accuracy in measuring and cutting the veneer. For this reason it is essential to keep the cutting edge of your knife very sharp. Craft or Stanley knives with replaceable blades are ideal.

Do not attempt to cut through the veneer with one stroke but rather use several light cuts. This prevents the fragile veneer from splintering or tearing. If the veneer is warped or buckled, dampen both sides and leave to dry between blotting paper under some weights.

When fastening the veneer, use a contact adhesive such as Evo-stik Impact adhesive (see Carpentry chapter 10, page 660).

Cutting board

This is an essential piece of equipment for marquetry work. A suitable design for a cutting board is given in fig.1. It is made from 12mm (½") plywood or chipboard 45cm x 61cm (18"x 24"). A strip of hardwood 12mm x 12mm (½"x ½") and 61cm (24") long is glued and screwed along one long edge of the board to act as a stop.

The chessboard

Though marquetry is usually associated with furniture decoration, a useful introduction to the craft is provided by making up a simple geometric design such as a chessboard. This design utilizes the contrasting colours of certain veneers—eg the brown of teak and the straw colour of oak. The dimensions are really a matter of personal choice and those given here are for a board 35.5cm (14") square with a playing area 30.5cm (12") square. Keep in mind that chessboards have 64 squares.

You will need:

One piece 12mm (½") thick plywood or chipboard 35.5cm (14") square—for the baseboard.

Two pieces 1.6mm ($\frac{1}{16}$") thick veneer 30.5cm x 20.5cm (12"x 8") in contrasting colours for the squares of the board.

One piece 1.6mm ($\frac{1}{16}$") thick veneer 37cm (14½") square to cover the back of the baseboard. This can be in the same colour as the darker squares of the board or in a matching dark colour.

Four strips 1.6mm ($\frac{1}{16}$") thick veneer 16mm (⅝") wide and 37cm (14½") long for the edges of the board. These should be the same colour as the base veneer.

Four strips 1.6mm ($\frac{1}{16}$") thick dark veneer 6mm (¼") wide and 37cm (14½") long—for the border of the chessboard.

Four strips 1.6mm ($\frac{1}{16}$") thick light veneer 6mm (¼") wide and 37cm (14½") long—for the border of the chessboard.

Four strips 1.6mm ($\frac{1}{16}$") thick dark veneer 12mm (½") wide and 37cm (14½") long—for the border of the chessboard.

Sellotape. Evo-stik Impact adhesive.

Garnet paper, grades 4/0, 7/0 and 9/0 and flour grade glasspaper. The abrasive surface of garnet paper is made from crushed grains of garnet stone and is ideal for fine sanding.

Trimming knife, steel rule and set square.

Cutting board.

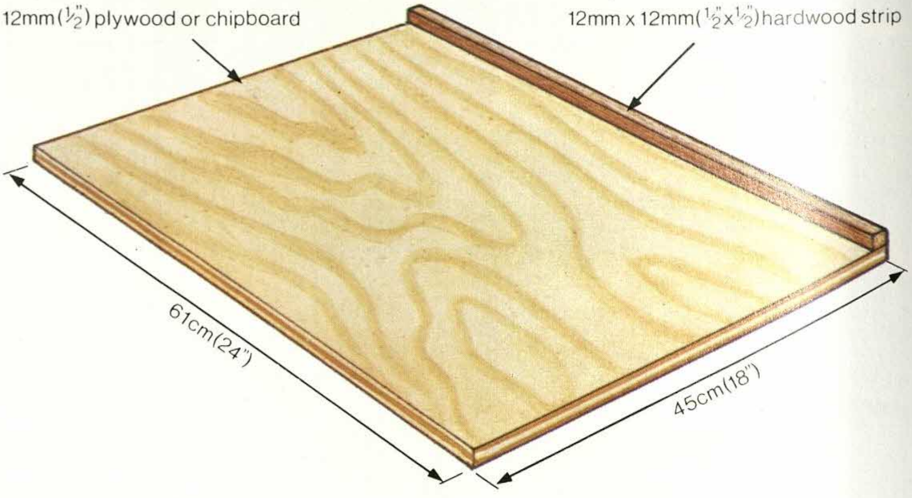
White or clear wood polish.

Polyurethane varnish—optional.

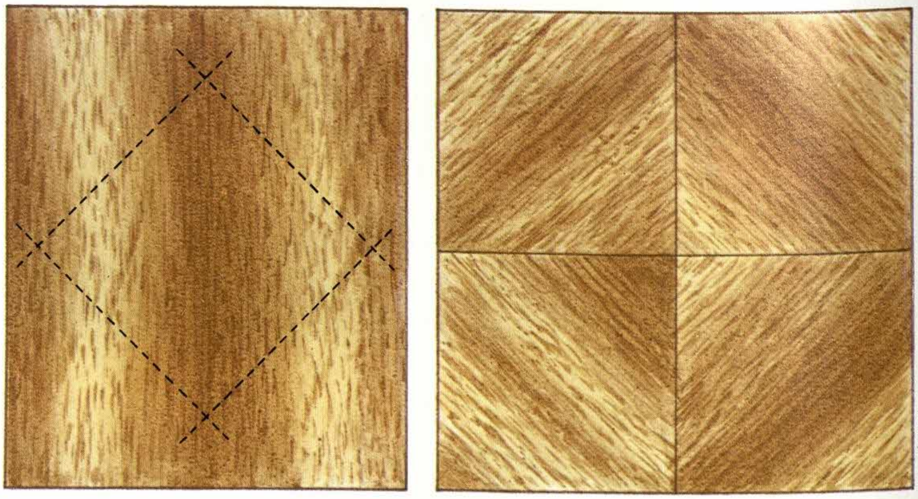
The baseboard. The veneering of the baseboard should begin with the back. This can be simply a sheet of veneer cut slightly oversize and glued to the back. The slight overhang is trimmed flush with the flour grade glasspaper. A more professional appearance is obtained by using matching quarters of veneer (fig.2). The four pieces should be cut from similar leaves of veneer.

Edges. The edges of the baseboard are veneered next. First glue veneer to two opposite side edges. Allow to set and sand flush with the flour grade glasspaper. The remaining edges are then veneered in the same way.

The squares. The squares for the playing area are cut from the sheets of light and dark veneer.

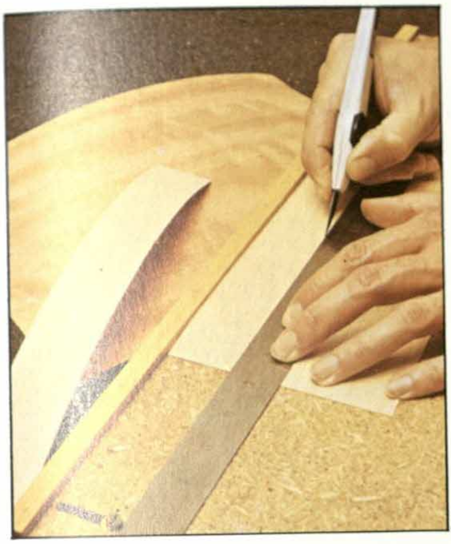

12mm(½") plywood or chipboard
12mm x 12mm(½"x½")hardwood strip
61cm(24")
45cm(18")

1. *Dimensions for cutting board which is an essential part of marquetry equipment.*



Paul Williams

2. *A backing for the chess-board can be made from four squares of veneer.*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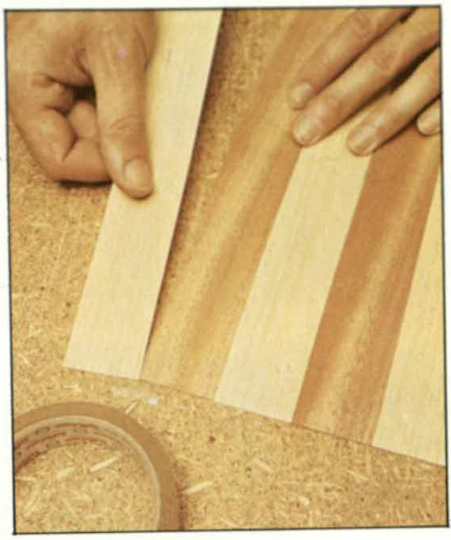
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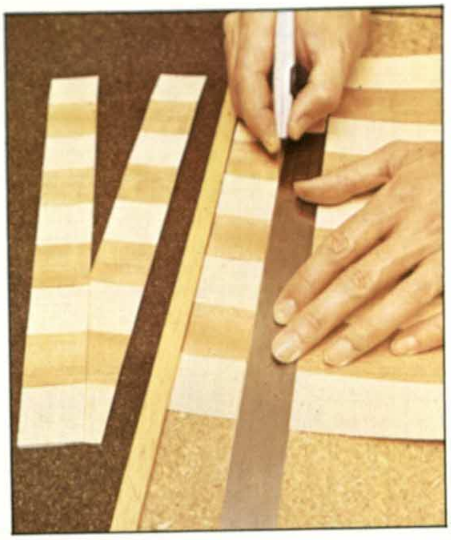
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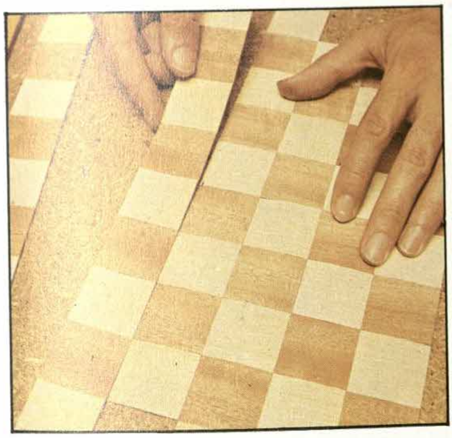
☐ Cut the sheets into strips 38mm (1½") wide and 30.5cm (12") long (fig.3). Take care to keep the veneers in the order in which they are cut.

☐ Tape the strips together in alternating colours with all the grains running in the same direction (fig.4).

☐ Place the taped strips on the cutting board and cut another lot of strips 38mm wide (1½") as shown in fig.5. Each strip should now contain nine 38mm (1½") squares.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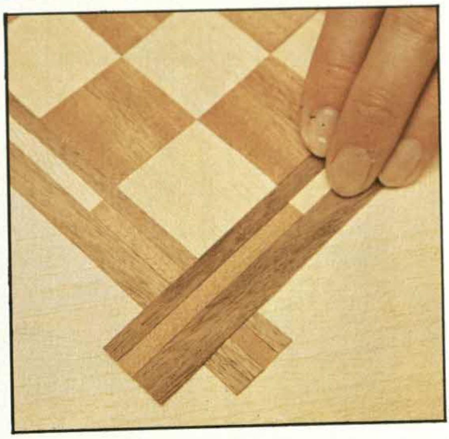
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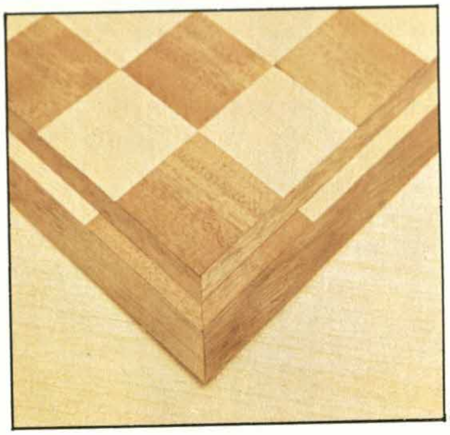
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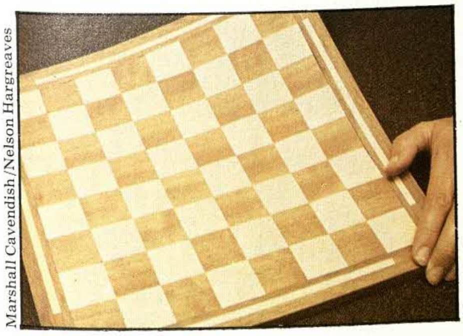
☐ Lay out these strips on the cutting board, staggering them so that they form a chequered pattern (fig.6). Again, keep the grains running in the same direction.

Make sure that the joints between adjacent strips of veneer are flush and check that the squares meet exactly at the corners. Hold in place with tape.

☐ Eight squares of light veneer will be left projecting from the main body of the assembly and these are carefully cut off.

Border. This is composed of the three narrow strips of veneer taped together as shown in fig.7. The corners of the border are elaborated with the insertion of contrasting dark veneer pieces 6.5cm (2½") long (see fig.7).

☐ The borders are taped to the side of the chequered board with the corner ends overlapping. They are then cut along the diagonal to form a mitred corner joint (fig.8).


9

Marshall Cavendish/Nelson Hargreaves

☐ The top is glued to the baseboard (fig.9). Here, the tape holding the veneers together is on the underside of the top and is left on while top is glued.

Finish

Using increasingly fine grades of garnet paper, the surface of the veneer is rubbed down. Take care not to round off any of the corners.

The chessboard can be polished with a clear or 'white' wood polish. For a very fine finish the traditional french polishing technique can be used.

Another alternative is to varnish the smoothed surfaces with a clear polyurethane varnish. The first coat can be diluted with white spirit. When the first coat is dry, sand it down lightly with the flour grade glasspaper and re-coat with undiluted varnish.

The chessboard can be incorporated into the top of an old coffee table that needs renovating. If the table top is square and not too large the veneer can be cut to size and glued directly to the surface. Alternatively, if the top is rectangular or a fairly large square, the veneer chessboard already made can be set on to the table top.

To do this, a piece of veneer the size of the top must be cut. Into this cut a square to take the chessboard. The two are then glued to the surface of the table. The surrounding piece of veneer serves to bring the surface of the table level with the surface of the chessboard. This technique is described in greater detail in the following chapter.

Three-dimensional honeycomb weave

Yarn — weaving 31

Honeycomb is an interesting and attractive type of weave often used for bedcovers or blankets because it combines a soft feel with the heat retaining properties inherent in a cellular structure.

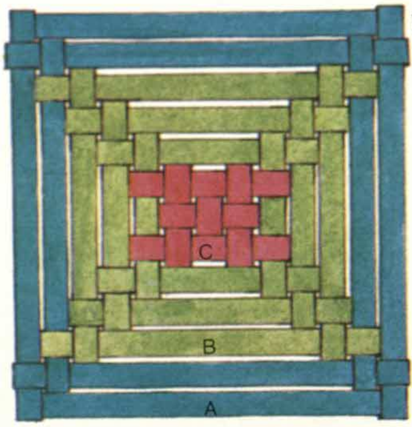
As the name implies, the appearance of a honeycomb fabric is rather like the comb structure made by the bee. This woven cellular cloth is produced by using a weave which forces the warp and weft yarns to group themselves into three distinct layers depending on the amount to which they float on the face of the fabric or interlace. The final effect is achieved only when the fabric has been taken off the loom and is no longer under tension. It then relaxes and becomes much more three-dimensional.

Three layers. The first layer of the cloth comprises the longest warp and weft floats which exist on the face of the cloth. They form the outside frame of the honeycomb on the one side (A in fig.1). The second layer is made up of the ends and picks which are doing the greatest amount of interlacing (B in fig.1). The third layer is formed by the longest warp and weft floats on the underside of the cloth (C in fig.1).

Construction. In order to construct a honeycomb similar to the one illustrated you will need to use a loom capable of taking seven shafts. The warp is threaded in a pointed draft (fig.2) and the weave is built up round a diamond framework. The filled in diamond in the weave plan indicates the warp floats and the areas left empty of marks show the position of the weft floats. The colour order for weaving the cloth shown in the photograph is given in fig.3.

The photographs and fig.3 show both sides of the honeycomb. The ridges on the face of the cloth become the hollows on the underside of the cloth and, conversely, the hollows on the face of the cloth become the ridges of the underside. Thus the fabric produced is completely reversible and fig.3 shows the reverse side.

This basic weave produces a cloth with longer floats in the weft than in the warp but, by modifying the weave plan, it is possible to obtain equal warp and



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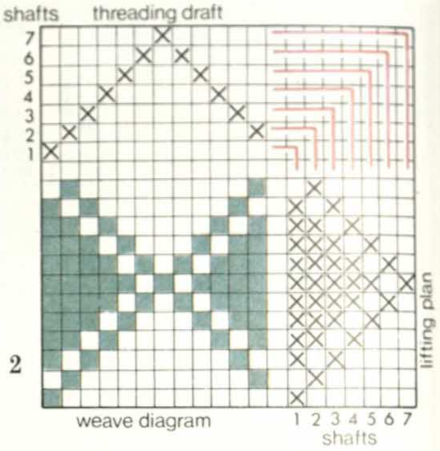
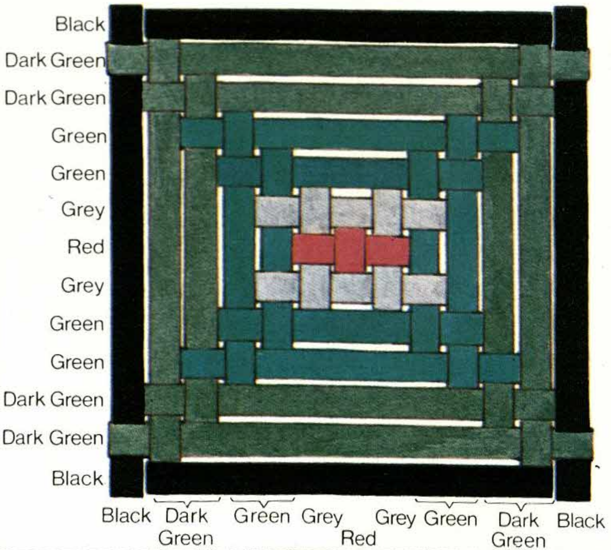


2

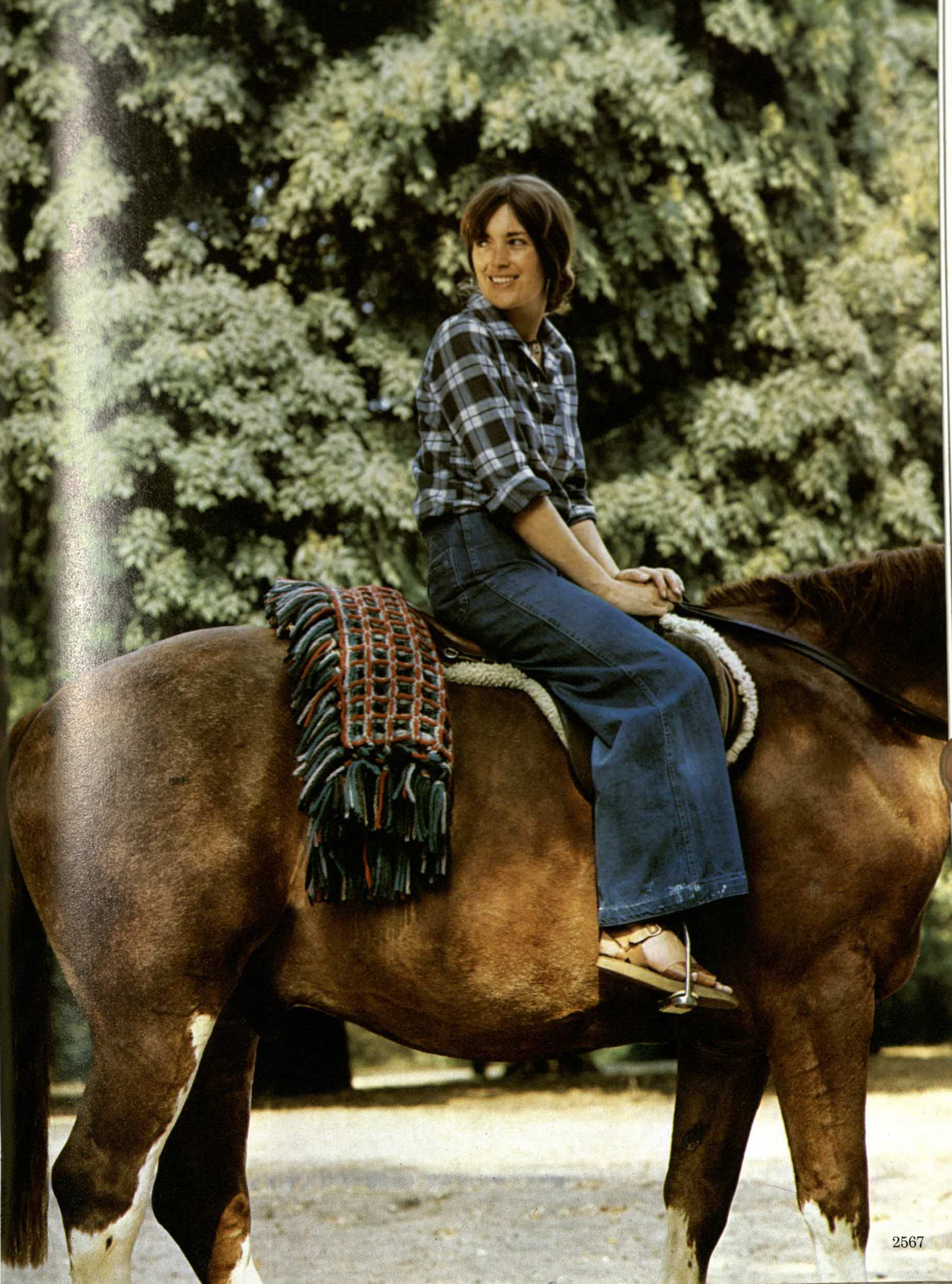
1. *Basic structure of honeycomb.*
2. *Standard draft, weave diagram and lifting plan for honeycomb weaves.*

Honeycomb 'bedroll' blanket (right) worked in Turkey wool combines warmth with softness. This design is woven on 7 shafts with a sett of 6 ends per 2.5cm (1"). These are five colours. One surface is predominately light and the other dark. Designed by Rita James.

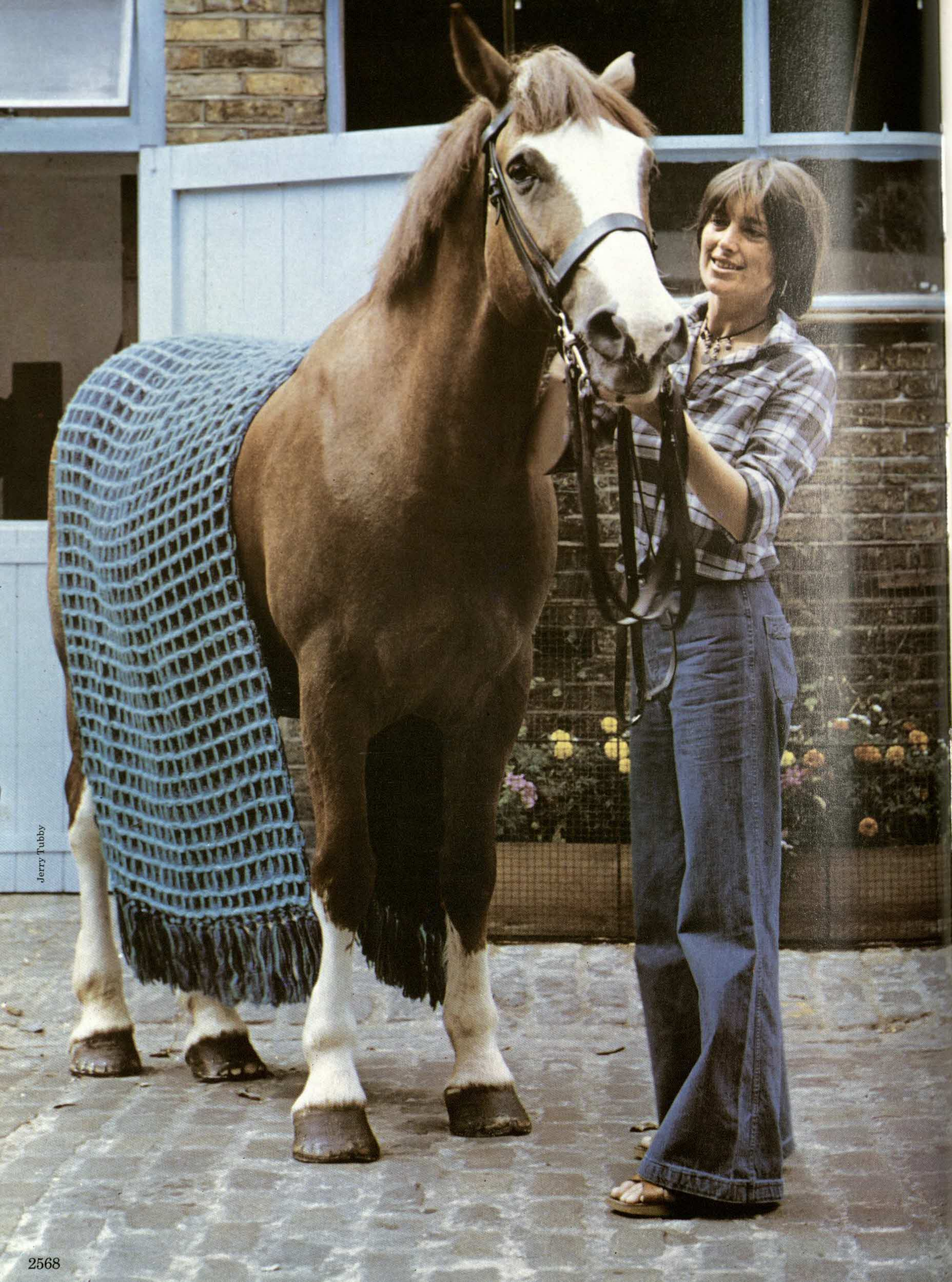
Detailed photograph shows the three-dimensional effect of the honeycomb structure. On this side of the cloth, the red outlines each square with black in the centre of each hollow.



3. *The colour order for weaving blanket in both warp and weft. In this reverse side of the fabric, the cells are outlined in black and only a speck of red shows in the centre of the hollows.*



Jerry Tubby



Jerry Tubby

weft floats (fig.4). Large honeycombs are liable to be loose in structure when constructed on this weave plan and it is sometimes necessary to secure the floats more firmly (fig.5). Unfortunately, the feel of the cloth becomes harder in direct ratio to the increase of the plain weave areas.

Left: blanket woven in thick wool on 9 shafts with a sett of 8 ends per 2.5cm (1"). Five related colours are used shading from light to dark. This creates a cloth which is light on one side with dark hollows and dark on the reverse with light hollows. By Rita James.

Designing a honeycomb

When designing a honeycomb as few as five shafts can be used or as many as sixteen. Whatever number of shafts used the basic principles of drafting and weaving remain the same. What makes the honeycomb weave particularly interesting and exciting is the enormous range of dramatic effects which it is possible to produce by choosing colours and tones which repeat in relation to the repetition of the cell structure itself.

For example, on the face of the cloth the floats which form the outline of each cell could be white and the warp and weft within each of the cells might form a progression through several tones of grey up to the middle thread which is black (fig.6). The reverse side of the cloth would show a black outlined square with tones of grey going towards white which would now be in the centre of each cell (fig.7).

To achieve this effect, the warp should be threaded up with the black threads on shaft one, through the greys to the white thread on shaft seven and back through the greys. The weft is inserted in the same colour order as the warp to achieve the totally symmetrical effect.

Colour experiments. Another way of experimenting with this weave would be to use yarns of different colours, tones or textures for each of the facets which make up the pattern repeat.

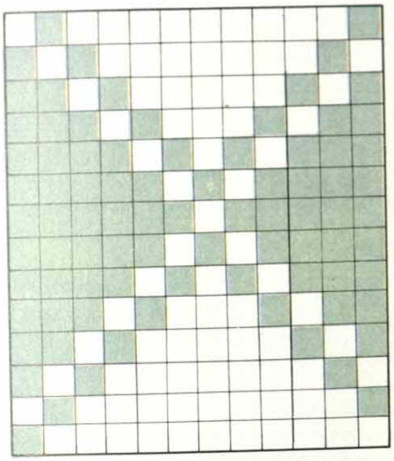
Obviously, the warp colour at A and B in fig.8 will remain constant throughout the length of the weave but the weft floats, C and D, could be very varied. It is a good idea to experiment with several permutations on paper before you begin weaving. There are so many possibilities—two ideas are given in fig.8.

Yarns. For the honeycomb weaves shown in this chapter, fairly thick yarns are used which exaggerate still further the inherent textural qualities of the weave. However, any type of yarn could equally well be used although the same yarn must be used in both warp and weft. The overall size of each honeycomb cell will relate directly to the count of the yarn and therefore to the number of ends per 2.5cm (1"). The sett of the warp needs to be approximately one and a half times that used for a closely sett plain weave.

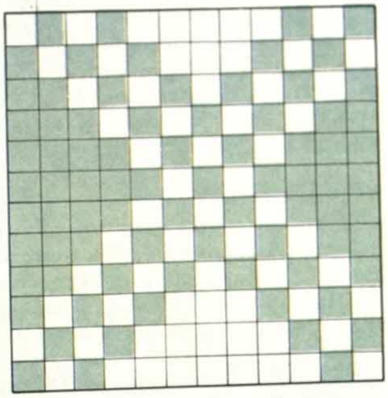
Ideas for honeycomb

Honeycomb weaves are quick and easy to weave once you have selected your yarns and worked out the position of colours in the pattern repeat. It is one of those happy blends of utility and aesthetic pleasure which make the craft of weaving such a satisfying and rewarding pastime.

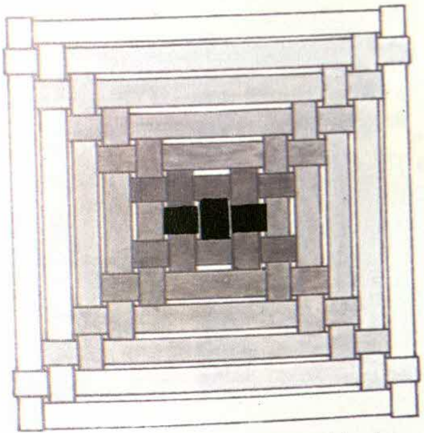
Even the smallest samples can be sewn together to make patchwork cushion covers, and larger pieces are really effective when made up into shawls and rugs, ponchos and blankets.



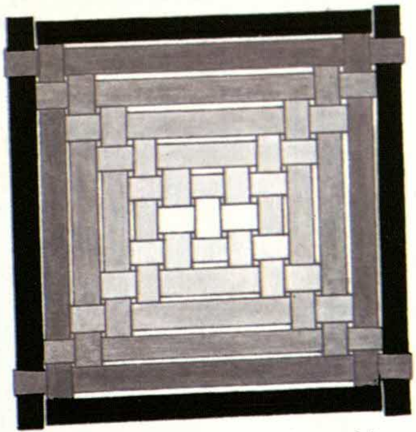
4. *Plan for equal length floats.*



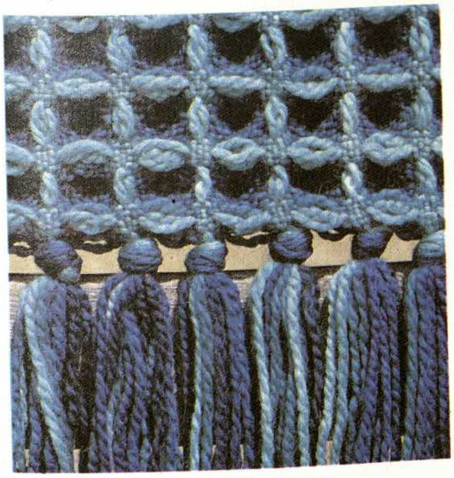
5. *Plan for very large designs.*



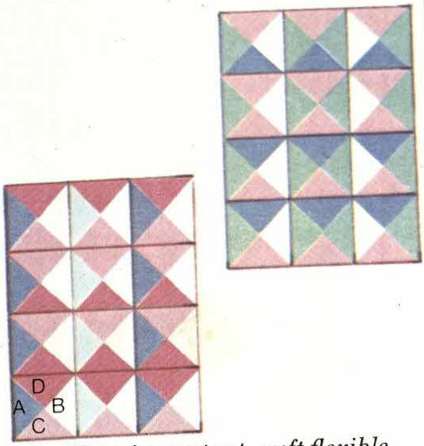
6. *Design grading white to black.*



7. *Back grades from black to white.*



Detail of cellular structure of weave.



8. *Warp is constant, weft flexible.*

Making scraper board pictures

Paper 67

Drawing on scraper board is different from most kinds of line drawing where dark lines are made on a white or light-coloured background. The use of scraper board reverses this process—white lines are made on a dark background and the result is similar to a fine linocut print or an engraving.

The scraper board itself is a brittle board coated with white chalk and then covered with a film of black ink. Scraper board is also available in plain white which you then ink yourself. The boards are obtainable from art suppliers in various sizes and are very cheap to buy.

Tools

The tools required are also very cheap. Any tool with a sharp point or edge, which will scratch the surface of the board cleanly, may be used. The pictures of the house and the pointer were worked with two scraper board tools and a craft knife blade (fig.1).

The tools look very like pen nibs and can be fitted into a standard pen holder. They are available separately or in packs and a holder is supplied with them. It is easier to use a craft knife blade or scalpel without a handle, since this gives more variety of angles at which it can be held. Bind the lower part of the blade with sticky tape to make it more comfortable to hold.

Technique

The technique of drawing on scraper board involves scratching the coloured surface of the board to reveal the white chalk underneath. Differently shaped tools make different kinds of lines, but all are crisp and clear. The diamond shaped pointed tool (fig.1a) makes fine lines; the tool with the bowed sides (fig.1b) produces a broader mark; the craft knife blade (fig.1c) makes even broader marks, which makes it useful for clearing away large areas of ink. By varying the angle of the tool or blade, differently shaped marks may be made.

Experiment with the different effects obtainable with each tool by working on a small piece of black scraper board. With a sharp craft knife cut a small rectangle from a larger piece of board. (Never cut the board with scissors as this cracks the brittle coating of chalk.) Do not attempt a picture at this stage; simply concentrate on the lines and textures you can achieve.

There is no need to dig the tool into the surface: light pressure is all that is needed to scrape off the ink. You can build up a variety of tones by massing lines together and crossing them over one another. Clouds may be conveyed by a series of curved lines at various distances apart. Foliage can be shown by short scratches or by stippling; short strokes worked upwards so that they are wider at the base give the impression of grass.

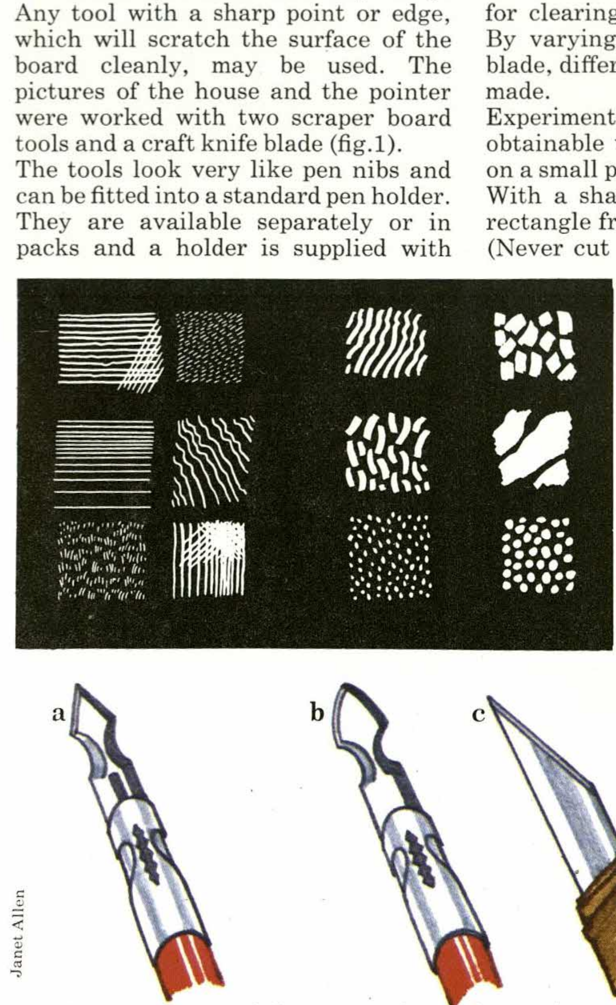
In addition to freehand lines, try drawing parallel lines using a steel ruler. Experiment with different spaces between the lines; a grey sky, for example, may be represented by drawing fine lines about a millimetre ($\frac{1}{20}$″) apart.

You will find that you have far more control over effects using a scraper tool than you would have with a paintbrush: you tend to work more slowly and therefore make fewer mistakes. If you do make a mistake, however, there is no need to abandon the drawing. Simply apply more ink to the area in which it occurs and try again.

As you work, the coating of ink which is removed will form a dust. Rather than brush this off the board, blow it away so that it will not go on the white areas and make them look dirty.

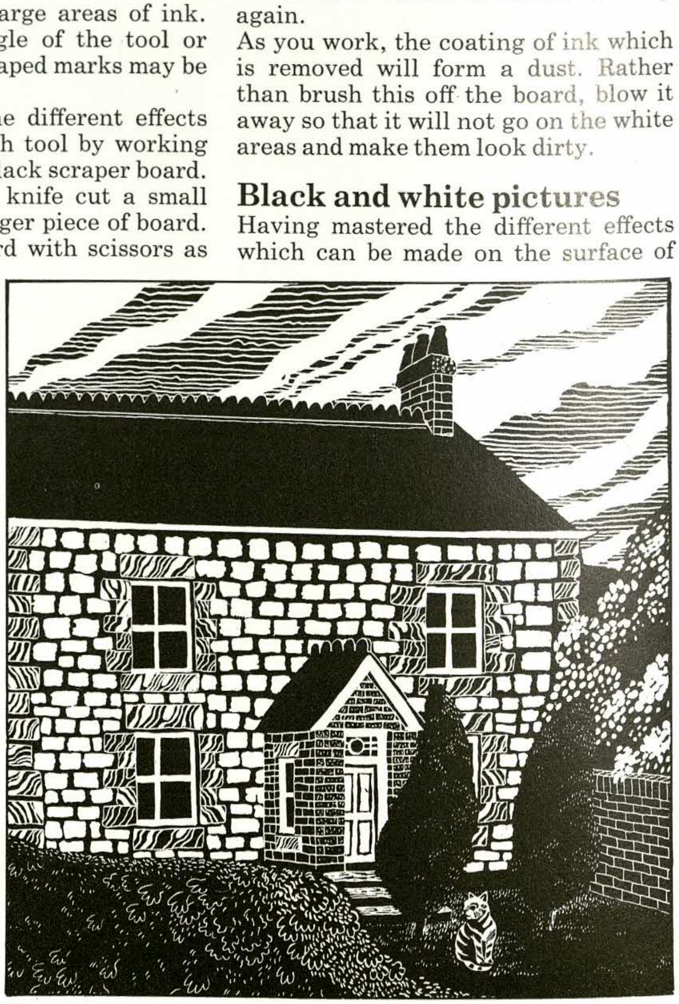
Black and white pictures

Having mastered the different effects which can be made on the surface of

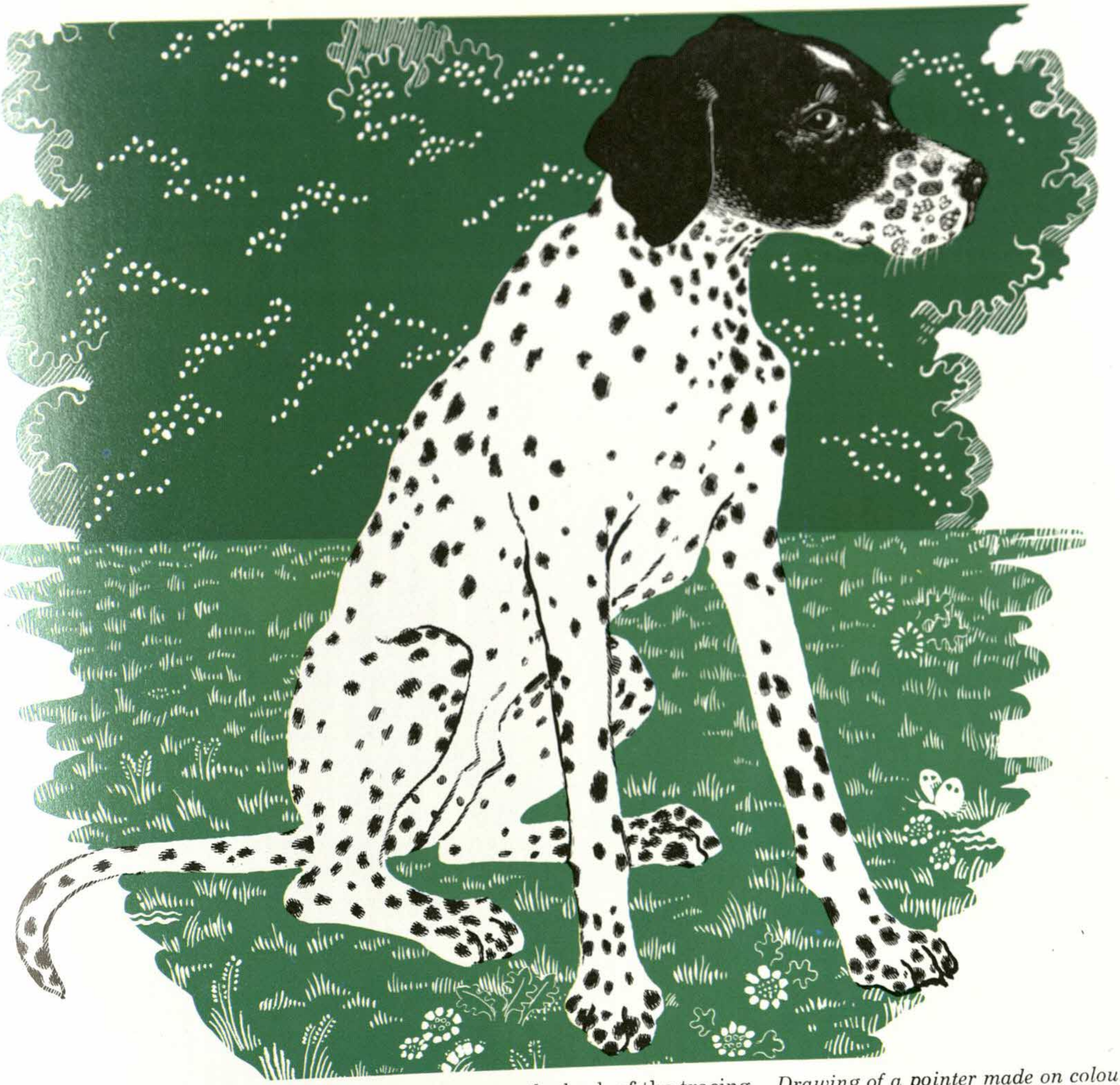


Janet Allen

1. *Different blades and the cutting shapes they make.*



House etched on black scraper board by Janet Allen.



Drawing of a pointer made on coloured scraper board, designed by Janet Allen.

scraper board, you can plan your first picture. Choose an engraving from a book, a drawing you have made, or a photograph.

Since you are drawing the effects of light rather than outlines, and the outline of an object is usually darker than the rest of the object, do not make heavy white outlines. Concentrate on placing light and dark areas and different textures and patterns against each other, imagining that where one area stops another automatically begins.

If you are in doubt as to how much white you should introduce into a certain section, leave it black until you have finished other parts of the picture. It will then be easier to judge the effect.

☐ Mount the board on a piece of stiff card before you start, since it may crack if you bend it.

☐ Trace the outline of the picture on to a sheet of tracing paper. Go over the traced lines on the back of the tracing paper with white chalk.

☐ Attach the tracing to the scraper board with sticky tape, with the chalked side against the board.

☐ Go over the lines of the tracing with a pencil. This will transfer the drawing in white which will show up against the black surface of the board. Remove the tracing paper.

☐ Using your finest tool, very lightly scratch in the outline on the board with small dots. You can then blow away the chalk outline.

☐ Once you have made the outline, work on a section at a time, where the same technique is required throughout. Work in the way already described, until you are satisfied with the result.

White scraper board

Traditionally, scraper board pictures are always made in black and white but you can experiment by using coloured inks or paints applied to the chalked board surface. Before you begin a coloured scraper board design, test the paint on a small trial area, and allow it to dry thoroughly before you scratch through it. Some types of water colour paint are unsuitable as they soak through the chalk coating, and the scratches will then not appear as white. Poster paint may also be used. It is best to keep to a limited colour range because the main characteristic of scraper board pictures should always be the fine white lines. Only two poster colours, brown and green, were used for the picture of the pointer. The dark green of the bushes is a mixture of green and brown. All the variations in tone were produced by scraper tools used in the various ways already described.

Willow–slewing and randing

Of all basket materials willow is the strongest, the most enduring and yet the lightest in weight. Furthermore willow costs less than cane and once the technique is mastered, willow is as easy as cane to work. The lovely natural velvety feel of willow makes it a pleasure to handle and it is kinder to the hands than cane.

Willow is gathered in the winter when the sap is down. It is processed into

Geoffrey Frosh

three different colours.

Brown willow is left to dry with the bark intact (it remains a dull green colour for a few years).

White willow has its bark peeled off and is then left to dry.

Buff-coloured willow is boiled for several hours in large vats to allow the tannin from the bark to run into the wood. It is then peeled and left to dry. The tannin stains the wood a reddish brown and also acts as a preservative. This is the best willow with which to start.

Buying willow

The processed willow is graded into lengths and then tied into bolts and sold as such. The bolts vary in length and to start it is wise to buy two bolts; one 90cm (36″) long and the other 1.5m (5′) long. This is quite a large quantity of willow and you might like to share it with somebody.

Tools

The tools required are similar to those used when working with cane. A knife is most important, it must be kept sharp and have a good point—a knife with replaceable blades is best. The knife is used for cutting and for pricking up.

A bodkin, secateurs and screwblock are used as with cane. The only other tool required is a rapping iron. This is used for making the work tighter or for levelling the weaving before putting on a border. A small hammer or a large old metal file will do.

Note: side cutters and round-nosed pliers are not used with willow because they bruise the rods.

Preparation

There are two things that you have to do before starting work.

Cutting out. The rods have to be graded into the amount and sizes required for the basket planned. This is known as 'cutting out' your materials. For example: select thick rods from which to cut the base weavers; medium rods for the side stakes; for the side weaving use rods which are thinner than the side stakes; very thin long rods if you are going to have a roped handle.

Note: never forget the basic rules; that the base sticks are the sturdiest in your basket, the base weavers are the finest, the side stakes must be thinner than the base sticks and the side weavers thinner than the side stakes. When selecting your side stakes be careful to see that each rod will be the right thickness at the point where the border will be. Do not hesitate to chop off 25cm-30cm (9″-12″) from the thick end to make it come right.

The weaving on the side of the willow egg basket is slewing and that on the other basket is French randing. Designed by Barbara Maynard.

Soaking. Once you have selected the amount that you need, plus a few for mistakes, soak the willow in cold water for two to three hours. Wrap the rods in a thick wet cloth for another two hours. They will then be ready for use and should feel velvety and soft to the touch. Keep them covered all the time until actually in use—they should keep in reasonable condition for two days but will then develop a greasy feel. Any that are not used can be dried and re-used later.

Differences in technique between willow and cane

The greatest difference between cane and willow is that cane remains very flexible and curves as it goes round stakes whereas willow kinks.

The important thing is to see that the kinks come in the right place—which is against the stake and not sticking out between the stakes. It will help if you hold the weaver in place against the stake with the thumb and forefinger of your left hand and merely slip the free end behind the next stake with your right hand.

Because of the kinks in willow, discard any rods that you have to undo. Cane can always be re-soaked and re-used.

Cane comes in long lengths of uniform thickness whereas willow comes in short lengths that are thick at one end (butts) and very fine at the other (tips). This means that certain rules have to be applied to avoid using a butt against a tip.

New cane is joined in as it runs out and, in waling for instance, if one runs out then only that one is renewed. In willow the weavers are all joined in at the same time so that they are always the same thickness. Start with tips and join in tips to tips and butts to butts. Select weavers of such a length that they will not run out together.

Although pairing and waling is used in the same way (except for joining in) and in the same places as for cane, there are special weaves for the sides to make the work look even. The best weaves to use are French randing and slewing which is explained in this chapter.

A cane basket is kept even all the way up the sides but a willow one is often higher on one side than the other so it must be rapped down to make it level before the border is put down.

The trac border is the easiest border for cane but the rod border is best for willow. At the end of this border the last few stakes are 'crammed-off' instead of being threaded through.

When making a cane basket all the sticks and stakes are cut—in willow only the base sticks are cut to the length required. The stakes are used as whole rods and are not cut off until the border is finished.

When making a willow basket, trim off any ends as you go. It is so much easier to cut willow while it is still damp.

Generally speaking a willow basket needs fewer sticks and stakes than a cane basket of the same size. Therefore the stakes will be further apart.

There is no step-up in waling when using willow.

Cane baskets are nearly always bye-staked and willow very seldom.

In willow, a rope or twisted handle is used much more than a wrapped one.

Willow stakes must be 'pricked up' with a knife after staking up instead of being nipped with round-nosed pliers.

The long base sticks are not wrapped in willow basketry.

The upsett must be put on with rods that go all the way round the base and overlap by a short length. If the rods are too short start the upsett in two places on opposites sides of the base. Then continue the whole upsett with these two sets of weavers, never letting them overlap. (This is seldom necessary on a round basket but nearly always needed on a square or oval basket.)

A small basket

Start off by making the small egg basket shown opposite.

It is 14cm ($5\frac{1}{2}$″) in diameter at the base and is 9cm ($3\frac{1}{2}$″) high.

You will need:

About 70 rods 90cm (36″) long.

Bodkin. Sharp knife.

☐ Soak the rods as described.

☐ From the bundle 'cut out' (that is the term used for grading the rods into stakes and weavers) 12 of the thinnest for the base weavers, 19 stoutish ones for the stakes, about 25 side weavers thinner than the side stakes. Cut 5 base sticks 15cm (6″) long from the butt ends of the thickest rods. (This will leave some rods spare in case you make a mistake.)

☐ Make a cross of 3 into 2 (as for cane).

☐ Insert the tips of 2 of the finest base weavers into the split of the cross and arrange them one on each side of one arm of the cross.

☐ Pair and open out the sticks as you work. When opening out, be firm and pull the sticks wide open—if they are well soaked they will not break.

Join in new weavers as required—a butt end starts with a butt and a tip end starts with a tip.

☐ End off the base with a set of tips.

☐ Trim off the base sticks while the willow is still damp.

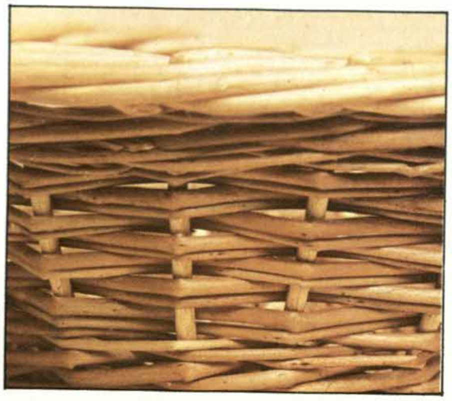
To stake up slype the 19 stakes and insert them into the base, one on each side of each stick end but leaving one out to create the odd number.

Prick up the stakes. To do this, insert the point of the knife in the stake just beyond the base pairing and then twist the knife in the cut and at the same time bend the stake up. Once it is done the stake can be turned down and then re-lifted when all the stakes are pricked up and ready to be tied into position.

☐ Tie the stakes together at the top.

☐ Insert the tips of 3 weavers into the base, beside 3 consecutive stakes, and upsett with a 3-rod wale. You do not have to step-up. Join in butts to butts and wale until the tips are reached (you will have used 6 rods in all).

Slewing is the most economical weave for the sides: it can be a 2-rod or 3-rod etc. Try the 2-rod first and use very fine weavers or they will dominate the stakes.


Dick Miller

Detail of slewing.

☐ Insert the butt end of a weaver into any space and rand until half the rod is used.

☐ Join in a second rod on top of the first again using the butt end. Weave with both together, keeping the second one on top of the first until the first runs out.

☐ Leave the tip of the first inside the basket and join in a new butt end on top of the second rod.

☐ Keep working this way until you have reached the desired height—7.5cm (3″) in this case. Finish by randing with the last one until it runs out.

☐ Put on a band of waling, starting and finishing with tips.

☐ Finish with a 3-rod or 4-rod border. This is done as for a cane border (Basketry chapter 4, page 692) but the last 3 (for a 3-rod) or 4 (for a 4-rod) stakes are crammed off.

Stakes are crammed off as threading leaves them badly kinked, thus spoiling the basket.

☐ Put on a 3-rod or 4-rod border until you have threaded the fifth stake from the right in front of the last upstanding stake and under the elbow of the first stake, and the last stake is also in place under the first stake. Take great care with the threading, trying very hard not to let the stakes kink.

☐ Using the fifth stake from the right, measure it up to the elbow of the second stake. Bend it down at this point, cut it off with a diagonal cut 5cm (2″) below the bend, and insert it into the siding just to the left of the second elbow. Use a bodkin to form a channel and gently tap the rod down into place.

☐ Repeat with the last two stakes.

☐ Trim off all the remaining ends.

Basket with handle

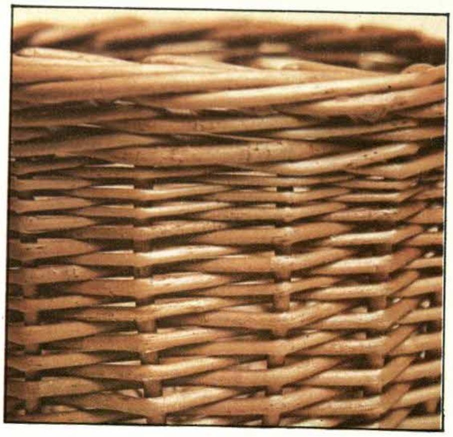
The basket shown holding tomatoes (page 2572) is equally suitable for posies. The base measures 9cm (3½″) and the height, excluding the handle, is 11cm (4¼″).

You will need:

About 60 rods 90cm (36″) long.
2 small nails.
Handle liners.

☐ Follow the instructions for the small basket until the upsett is complete.

French randing is used on the sides of the basket (this weave is not suitable for cane). The number of rods used equals the number of stakes—in this case 19.



Detail of French randing.

☐ Place the butt end of a weaver between any two stakes. Pass it in front of one to the right, behind one and back to the front.

☐ Place the butt end of another weaver in the space to the left of the first weaver and take it in front of one, behind one and back to the front.

☐ Continue like this all the way round so that you have a weaver in each space. When inserting the last two weavers be careful not to cross over the first two, lift them and pass the last two underneath.

This forms one complete round of French randing.

☐ Starting anywhere put on another round, ie take one weaver in front, behind and back to the front then repeat with the weaver to the left etc.

☐ Work all the way round until you reach the space which has two weavers.

☐ Take the bottom weaver in front, behind and back to the front.

☐ Take the last weaver, ie the second of the double ones, in front of one, behind one and back to the front but do not let it cross the first weavers—lift the first weavers so that the last one can pass underneath them.

☐ Continue with these rounds until the sides are the height you want or the weavers run out. Place the ends to the inside of the work and trim the tips.

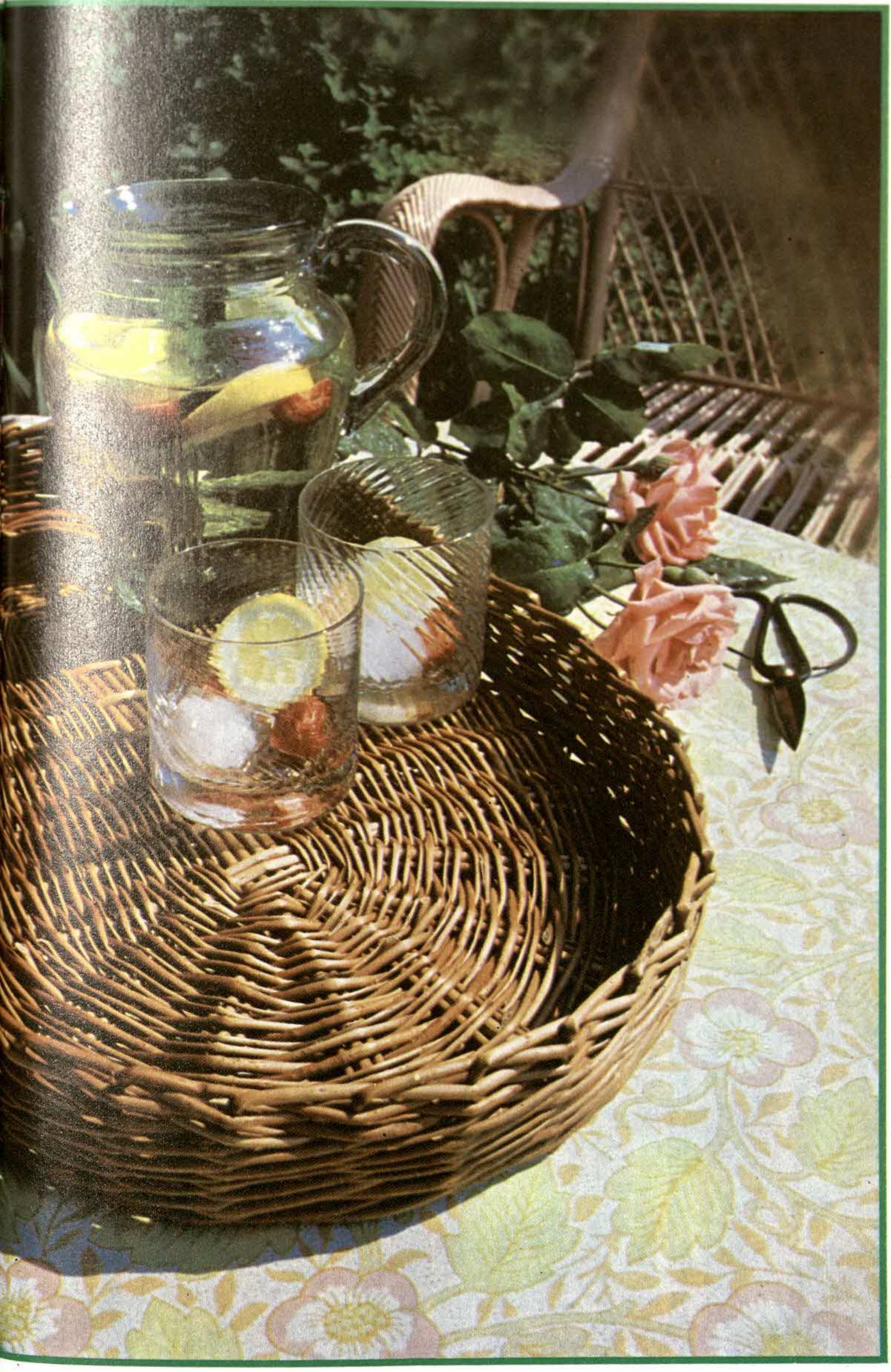
☐ Insert handle liners.
☐ Put on one or two rounds of waling.
☐ Put on a 3-rod or 4-rod border and cram off.
☐ Cut 2 rods from the butt ends the length required for the handle. Slype all the ends.
☐ Remove handle liners and insert two ends in the one space. Twist the two rods together and push the other ends into the space made by the handle liner.
☐ Pin the handle in position with a couple of very small nails.

This is a very simple handle but it is the basic way to make a twisted handle. For larger baskets, use more rods, slyping all the ends, and then proceeding as before.

Oval tray

The completed tray is 46cm (18″) long and 32cm (12½″) wide.

The base of an oval basket in willow is made in a similar way as described for oval work in cane, except that the base sticks are not wrapped. Basket shown designed by Barbara Maynard.



Geoffrey Frosh

You will need:
About 130 rods 90cm (36″) long.
13 thick rods 1.5m (5′) long.

☐ From the thicker rods cut 4 base sticks 48cm (19″) long and 9 shorter ones 33cm (13″) long.
☐ Piece the short sticks in the centre and thread the long ones through as for working with cane.
☐ Pair for 6.5cm (2½″) then reverse pair for 6.5cm (2½″).
☐ Stake up with 37 side stakes—one on each side of each long stick and the outer short sticks, and one stake between each of the remaining base sticks. Add an extra one to make an odd number at one of the ends.
☐ Tie the stakes into two bunches.
☐ Upsett with a 4-rod wale for one round then continue with a 3-rod wale. Wale until the work measures 4cm (1½″).
☐ Put on a trac border—behind one, in front of one, behind one, in front of one—then leave the end on inside of the work. Make the elbow 19mm (¾″) above the waling so that the border will be the same height all the way round.

General hints

One of the most common mistakes is to use rods that are too thick for the job, making it difficult to shape and manipulate the work. Do not hesitate to discard or cut off a portion of the thick butt end.

If the willow dries out and becomes squeaky hold it under the tap for a few minutes. It will re-soak quickly.

Do not keep damp work or willow in polythene bags as it will become mouldy—dry out and then re-soak when necessary.

Always start and finish bands of waling and pairing with the tips of the rods. This makes a smooth run in and run out of the weave in question.

Join in tips to tips and butts to butts.

Use the natural curve of the willow in the right way to help you with the concave shape of the base.

Practise slyping on your willow rods. The end should have a good sharp point. Vary the length of the slype according to the need; the slype on a stake to be inserted into the base should be nearly as long as the depth that it will be inserted. You will then find staking up much easier.

Do not worry about set rounds of waling or pairing—carry on until the rods have run out to the tips. This makes for a smoother and more even finish.

Cutting tools for craft work

Design know-how 84

A number of different cutting tools are sold which are suitable for use with particular materials.

Paper and card

For cutting straight lines, a sharp knife such as a Stanley knife or a Swann-Morton scalpel run against a ruler is most efficient. Both these cutting tools have detachable blades which can be renewed when blunt.

For cutting curved shapes a sharp pair of scissors or a sharp knife run round a template can be used.

Blunt-ended scissors are sold for children to use.

Metal

Thin metal such as tin can be cut with tin snips. These are available with straight blades for cutting straight lines, and curved blades for cutting curved shapes.

Thicker metal is cut using a hack saw or mini-hack saw. These have detachable blades which can be changed when blunt or to suit the metal to be cut. The thinner the metal the finer the blade should be.

The piercing saw is designed to enable you to cut out curved shapes from pieces of metal (fig.1). This also has detachable blades—finer blades for thinner metals. A fine blade should also be used for cutting tight curves.

Wire should be cut with wire cutters. The thicker the wire the heavier the cutters must be.

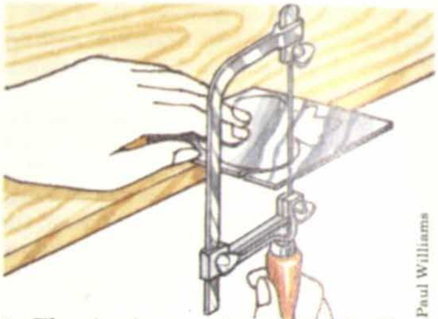
Wood

There are a number of different types of saw for cutting wood.

The hand saw is the most common and comes in three types—the rip saw for cutting softwood along the grain; the cross-cut saw for cutting wood across the grain; the panel saw which can be used for cutting hard and softwood, plywood, blockboard, and hardboard.

The tenon saw is used for general carpentry, cutting small pieces of wood across the grain for such things as joints.

For cutting out shapes from wood a coping saw or fret saw can be used. In construction these are similar to the piercing saw (see fig.1) enabling the blade to cut far into the wood. A bow saw serves the same purpose but is used for large pieces of wood. All these have detachable blades which can be renewed when blunt.



Paul Williams

1. *The piercing saw is used vertically.*

Very thin wood such as veneer, can be cut with a sharp knife such as a Stanley knife.

Plastic

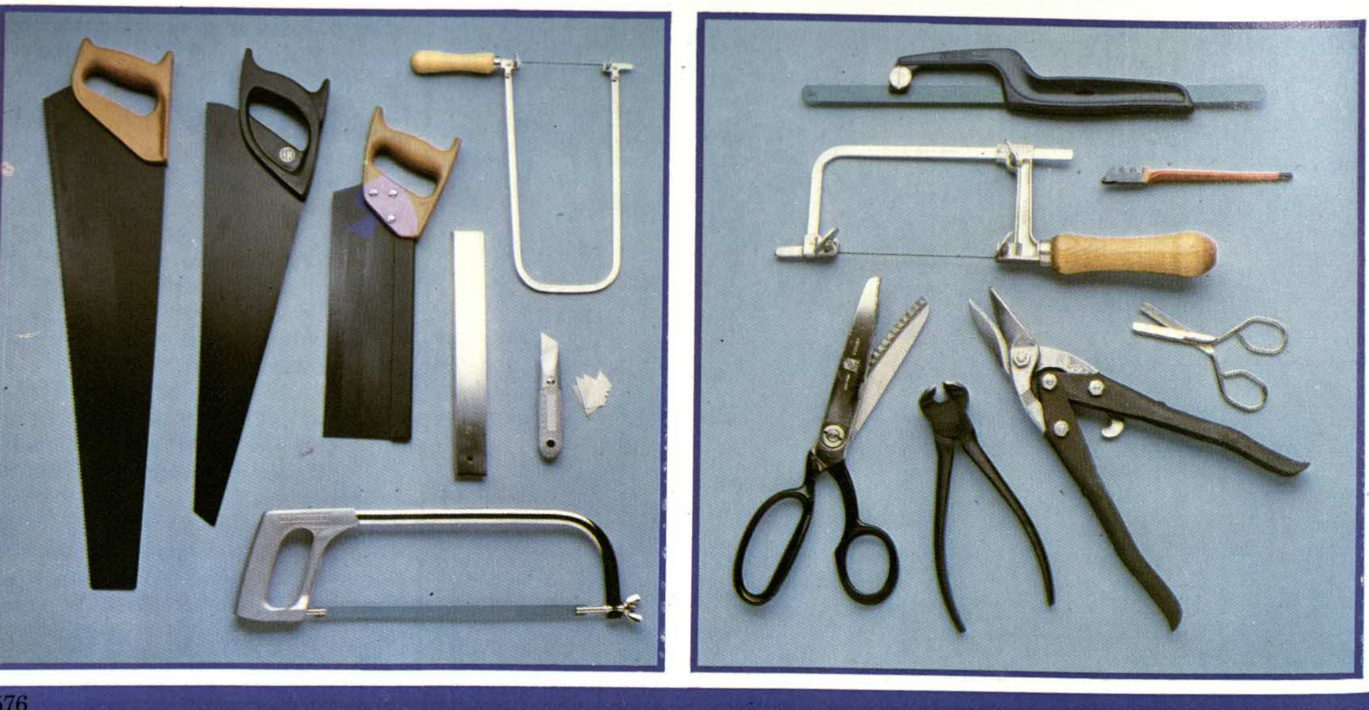
Plastic can be cut using a hack saw or piercing saw with a very fine blade. Plastic must be cut slowly and carefully to avoid cracking or splintering.

Glass

Glass is cut with a special glass cutting tool which is used to score the glass along the cutting line. The score line is then tapped gently until the glass splits in two along the line. Small chips of glass can be taken off with 'grozers' which are similar to pliers.

Cloth and yarns

These are cut with scissors—large scissors for cutting out material and smaller for detailed work. Pinking shears can be used on seams to produce a zigzag edge which will not fray.



Alan Duns

Assorted cutting tools: on the left, two hand saws, a tenon saw and fret saw together with a straight edge, Stanley knife and hack saw. On the right, a mini-hack saw and piercing saw plus a glass cutter, pinking shears, wire cutters, tin snips and scissors.

Creative ideas 92

Cactus pincushion

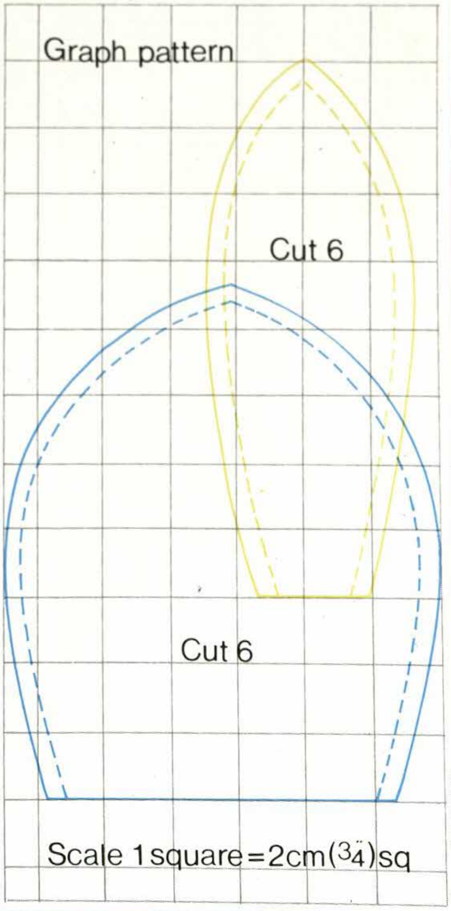
Few people would think of making a felt pincushion so that it looks like a cactus. However, this original design means that the inserted pins resemble prickly cactus spikes. An assortment of needlework items can be kept in the plant pot on which the pincushion sits. When not in use the items can be successfully hidden by the cactus.

You will need:
Green felt for cactus body and shoot.
Scraps of yellow and green felt.
Cotton wool.
Needle and thread.
Two circles of 15mm (⅝") chipboard with diameters of 17cm (6¾") and 14cm (5½").
Plant pot 15cm (6") high, with a 17cm (6¾") diameter at widest part.
Fabric glue. Paint (optional).
Woodworking adhesive.

Enlarge and transfer cactus patterns from the graph on to main piece of green felt. Cut out six of each.
With a 6mm (¼") seam allowance sew the six body sections together, leaving bottom edges open. Similarly join shoot sections.
Turn body and shoot right side out and stuff each firmly with cotton wool.
With woodworking adhesive stick the two chipboard circles together so that the centres match. (The smaller chipboard circle rests inside plant pot.)
Pull the open end of the cactus body over the larger circle of chipboard. Turn under and stick felt edges to underside of chipboard.
Paint lid sides (optional).
Sew shoot to body.
Cut out and assemble fourteen oval petals and a small number of yellow stamens for each flower. For a tighter cluster of stamens stick yellow strips together. Stitch flowers together and then stick each to cactus.

The pot is the sewing basket and the lid the pincushion.

Camera Press

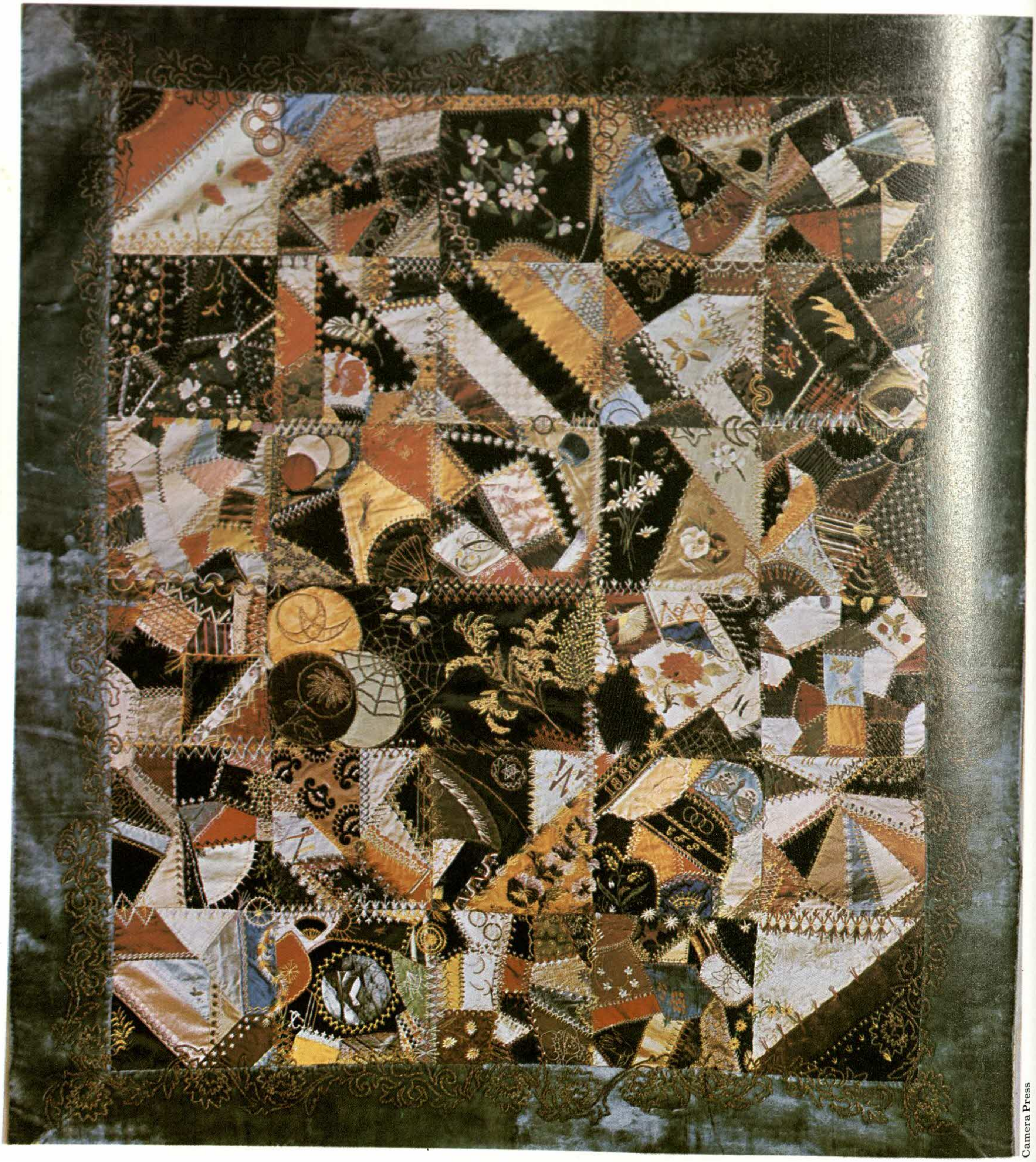


Trevor Lawrence

Colourful crazy patchwork

Cloth — patchwork 11

Crazy patchwork is one of the simplest forms of patchwork, demanding little skill in stitching or planning. It consists of sewing unhemmed scraps of fabric on to a foundation fabric in a random fashion. The raw edges are then covered with embroidery which prevents them from fraying.



A superb quilt of random patches worked in blocks and embroidered.

Camera Press

The time devoted to the embroidery depends very much on the individual. The method of working can range from the most elaborate hand worked embroidery to a machined zigzag stitch.

Crazy patchwork is thought to have originated in America in the 17th century as an economical method of making quilts. Crazy quilts were often created out of warm woollen fabrics, frequently cut from old clothes. The great advantage of this method was that virtually any scrap of fabric—whatever its size or shape—could be used, and that it was quick and simple to execute.

Crazy patchwork did not become popular in England until the mid 19th century. Towards the end of the last century, the nature of crazy patchwork underwent a radical change. It developed from its lowly origins to a luxurious and elaborate affair, particularly in Victorian England. Sumptuous silk and velvet fabrics were used, which, in spite of their own rich texture and colour, were almost hidden by decorative embroidery worked in silk and metallic threads. Ribbon, braid, beads and sequins were also incorporated.

The crazy patchwork of today has returned to its former simplicity for practical reasons of rapidity and durability. It is often made up of cotton fabrics which, as for all patchwork, are the most suitable, especially if the article is to undergo constant use and frequent washing.

A mixture of fabrics is possible since the foundation fabric bears much of the strain, but the resulting work will not be so strong. An excess of embroidery and decoration can also weaken the patches and makes cleaning more difficult.

Method

The initial preparation and assembly of patches for crazy patchwork is extremely simple. It should appeal to anyone who lacks the patience necessary for other forms of patchwork, many of which demand careful and time-consuming planning.

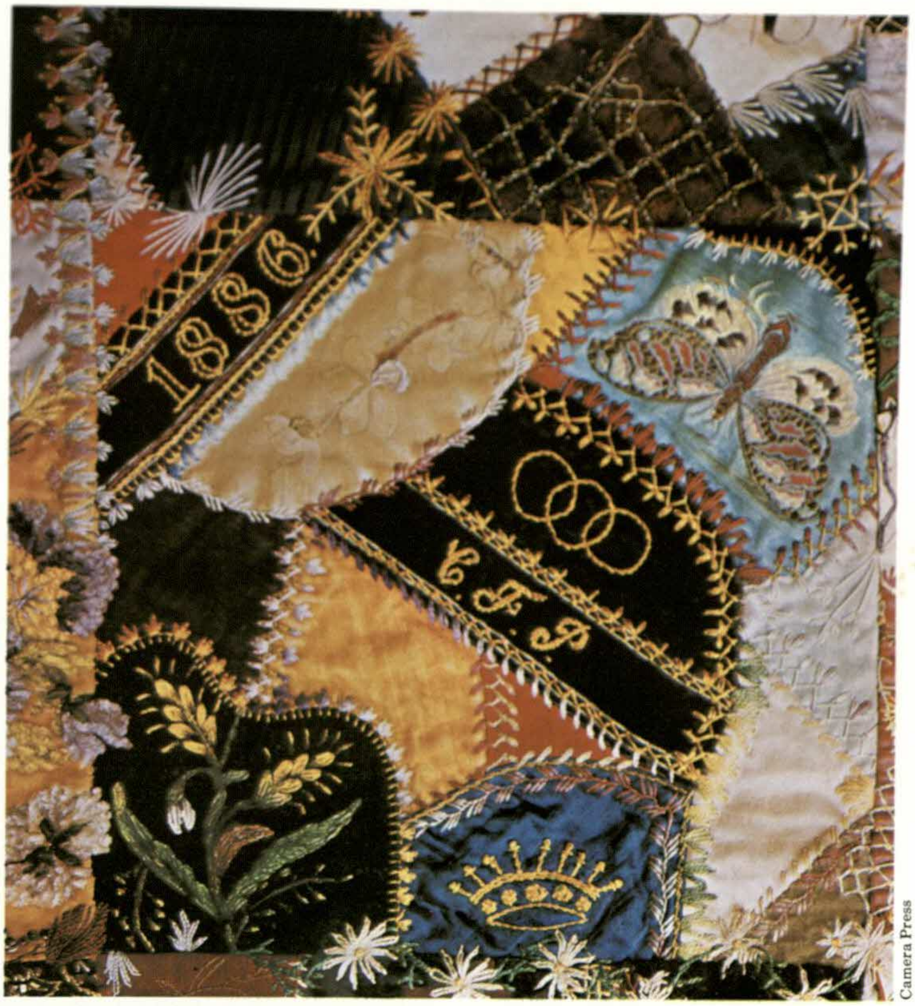
The foundation

You will need a strong but light-weight foundation fabric that is not too stiff, such as a fine cotton fabric. The backing fabric must be the size of the finished article.

It can be made up of a single piece of fabric or several pieces of fabric joined together in back stitch or straight machine stitch to make up the required size. Economize by using the good parts of worn sheets or large sections of discarded dresses.

Alternatively, the patchwork may be made up in sections which are later joined together when they are completed. This approach is based on the same principle as the American method of quilt construction by blocks (see Patchwork chapters 7 and 8, page 2110 and 2214 respectively).

Whatever method is employed, the foundation fabric should be ironed before any patches are applied to ensure that it is quite flat.


Camera Press

Detail of quilt opposite illustrates the rich variety of stitching used to decorate the velvet patches and to keep the edges from fraying.

The patches

You will need as many different scraps of fabric as possible. You can continue collecting additional scraps as work progresses if you have no definite overall pattern in mind.

Patches can be of virtually any size and shape. Ensure that they do not show signs of wear. Iron them flat and trim off any frayed edges and irregular ends.

Design

Unless a particular colour scheme is desired, no initial planning is needed. Although the pattern is a random one, a balance of light and dark shades and of relative sizes and shapes of the patches is required if the result is not to be too disorganized and messy.

It is therefore advisable to plan the arrangement of about a dozen patches at a time as you work. Try overlapping them, and move them around until you are satisfied that they look right in relation to each other and to any work already completed. A predominant colour randomly interspersed helps to strengthen the design.

It is also possible to work to a prearranged pattern—a specific colour grouping of patches, for example, or sections of crazy patchwork, each framed by bands of a single colour. If you intend to approach crazy patchwork in this way, work out your design on paper, and then mark it out on the foundation fabric as a guide.

Applying patches

Lay the first few patches on to the foundation fabric, overlapping them by 1.5cm (½"). It is usual to start working in one corner of the foundation fabric with a right-angled patch, but this is not a strict rule.

When you have decided on the arrangement of the first few patches, pin them to the foundation. Working on the right side and starting with the first patch, sew it to the foundation with an even running stitch round its raw

Steve Bicknell

A modern example of crazy patchwork designed and made by Kathleen Smith.

edges. Sew round the raw edges of each of the adjoining patches in turn. Where patches overlap, make sure that you stitch through all the layers of fabric, including the foundation fabric, so that the raw edges cannot slip out. Remove the pins as you work, and continue adding patches until you have covered the foundation fabric.

An alternative method is to apply the patches with a straight machine stitch. Use a fairly long stitch and check your tension to ensure that there is no 'pull' on the patches. You must be particularly careful about this if you are using fabrics of different weights within the same piece of work.

Whichever method you choose, the next stage—intended to hide both the stitching and the raw edges—is the same.

There is a third method of application, however, which combines the covering of the raw edges. This is to use a machine with a swing needle. Simply pin the patches on to the foundation fabric and, using a fairly wide zigzag stitch, sew them to the foundation following the raw edges.

It is advisable to go over the edges a second time using a closer zigzag stitch for extra strength and to guard against fraying if the article is to be washed frequently.

Embroidery

Unless you have used the last method of applying patches, the raw edges of the patches need to be covered with embroidery to prevent them from fraying. The basic hand worked stitches for this process are feather stitch and herringbone stitch and they should cover both the raw edges and the initial stitching. This additional stitchery will also strengthen the patchwork fabric. The use of a single colour thread throughout acts as a unifying factor and gives a degree of consistency to a random design. There are many kinds of embroidery stitch and thread that can be used. Experiment, adding beads and ribbons as in Victorian quilts for a rich, elaborate effect.

Finishing

Crazy patchwork results in a thick, heavy article which is virtually impossible to quilt. It is sufficient simply to line it—preferably in a shade to echo a predominant colour in the patchwork.

Traditionally, the edges of a piece of crazy patchwork were simply turned under and the lining was attached by two rows of running stitch round the edges. You may prefer to bind the edges of the patchwork or to add a decorative fringe, frill or braiding for a final flourish. Any such edging should be in keeping with the overall effect of the work, and should not overpower it.

Crazy quilt (right) achieves regularity by intermixing solid squares (see detail).

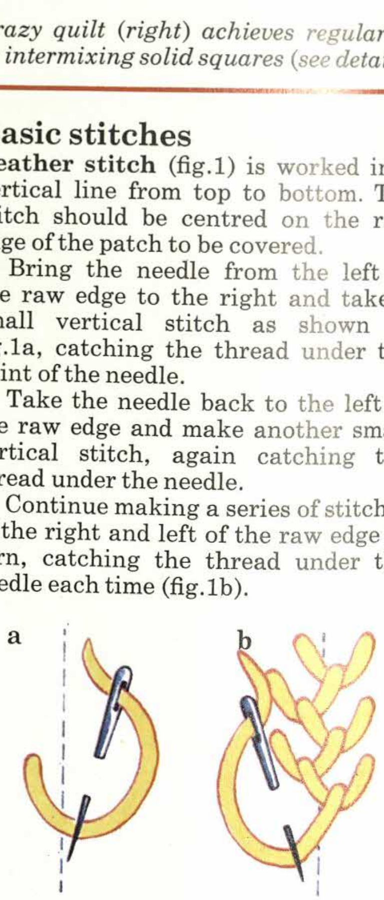
Basic stitches

Feather stitch (fig.1) is worked in a vertical line from top to bottom. The stitch should be centred on the raw edge of the patch to be covered.

☐ Bring the needle from the left of the raw edge to the right and take a small vertical stitch as shown in fig.1a, catching the thread under the point of the needle.

☐ Take the needle back to the left of the raw edge and make another small vertical stitch, again catching the thread under the needle.

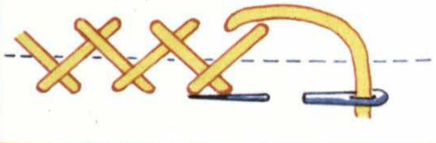
☐ Continue making a series of stitches to the right and left of the raw edge in turn, catching the thread under the needle each time (fig.1b).



Coral Mula

Herringbone stitch (fig.2) is worked from left to right. Again, the stitch should be centred on the raw edge being covered.

☐ Make a series of small horizontal stitches to the left, above and below the raw edge in turn as shown.



Pictorial marquetry

Having familiarized yourself with the basic techniques of marquetry described in the previous chapter, you can now attempt more elaborate designs. Pictorial marquetry is commonly called the 'window method' of marquetry because the background veneer acts like a stencil. The design is traced on to the background veneer and the different areas to be inlaid are cut out in the background, leaving a window. The window is then used as a stencil or guide for cutting the veneer which is later inlaid in the window.

Thus, rather than cutting into the surface of the wood and inlaying pieces of wood, a 'false' surface is cut—ie the background veneer—into which the pattern is set. The method enables you to cover large and small items, from table tops to wooden jewelry boxes. This chapter describes how to make a set of place mats using the window method.

As mentioned in Carpentry chapter 30, page 2262, there is a vast range of wood veneers available today and the natural colours can be used effectively in most designs. However, you may wish to use bright colours and, in this case, the veneers can be dyed. If dyed or brightly coloured veneers are used, it is important to apply a sanding sealer to the lighter areas before sanding the whole picture. This will prevent any colour and dust entering the pores of the lighter wood and staining it.

Picturepoint

Place mats

The butterfly designs used in the place mats can be adapted for many other items, such as table tops or trays. The mats shown here have diameters of 18cm (7″) and 23cm (9″) but can be altered to suit your needs. The instructions and materials are for the smaller mat, and the trace pattern and examples of inlay are given overleaf.

You will need:

Cutting board (see Carpentry chapter 30).

Trimming knife or small light scalpel.

Carbon paper, tracing paper and pencil with a fine point.

Hack saw blade or coarse grade glasspaper.

Brown gum strip tape and masking tape.

Balsa cement and impact adhesive.

Garnet sandpaper—grades 4/0, 7/0 and 9/0—and fine grade glasspaper.

3mm ($\frac{1}{8}$″) plywood 18cm (7″) in diameter —for baseboard.

Felt for underside of mats—optional.

Furniglas Hardset or a plastic coating such as made by Rustin's.

Veneers—selection as shown and listed overleaf.

The butterfly. Draw design overleaf on to tracing paper and plan which veneers will suit the respective areas. As the butterfly is symmetrical only one side has been given.

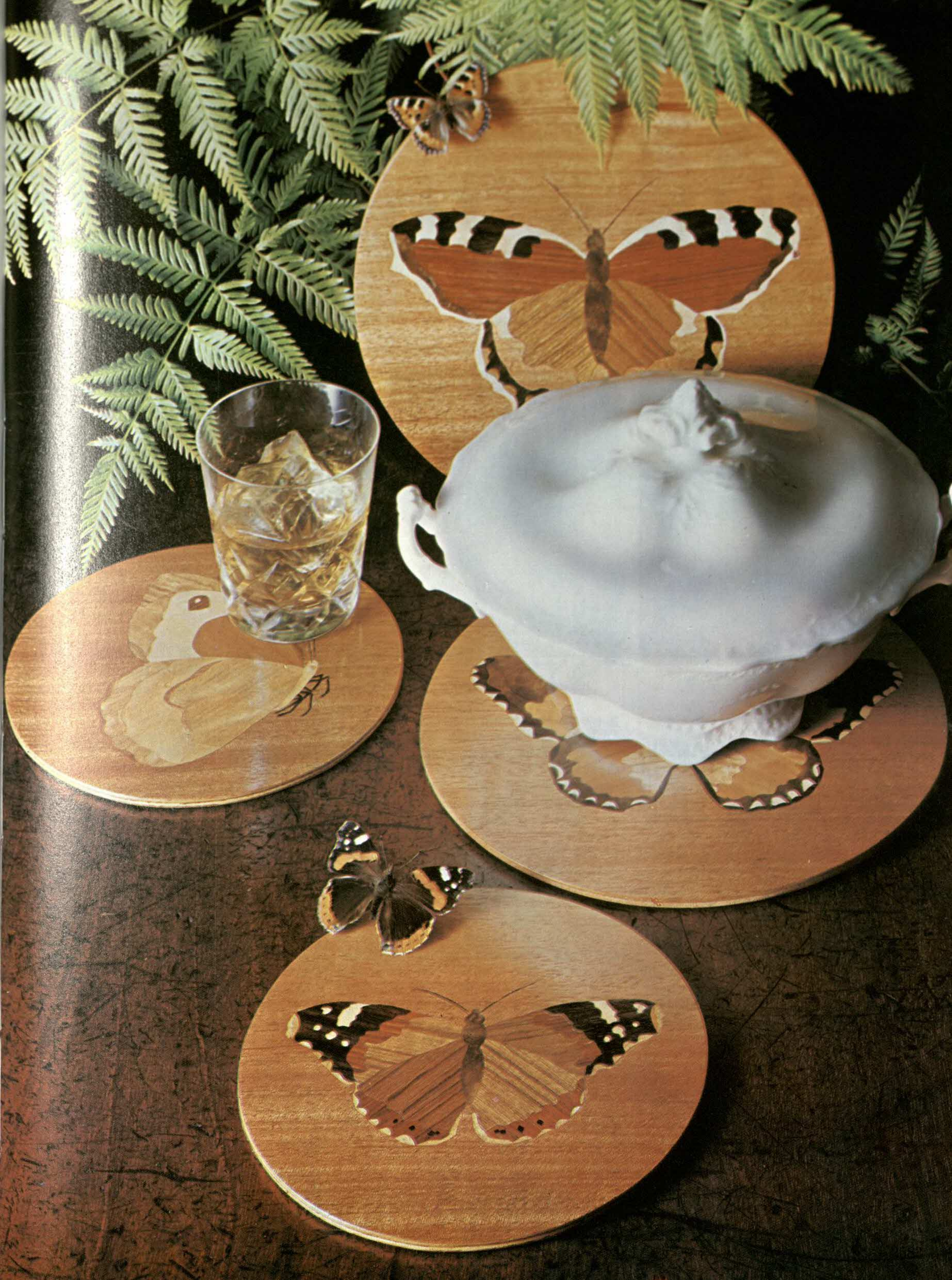
The numbers given on the veneers illustrated overleaf are for identification. The colours of the veneers can be used as a guide in selecting your own.

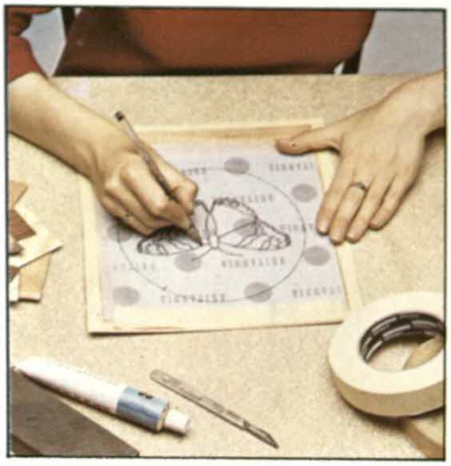
☐ Select the background veneer. This should be a pale-coloured wood which is easy to cut. Here, mahogany has been used. Cut the background veneer slightly larger than the finished item.

☐ Tape the edges of the veneer to prevent splitting and hinge the tracing paper to the veneer with a strip of masking tape. Put carbon paper behind and trace with the fine pointed pencil. Transfer the main features of the design on to the veneer, omitting the small white areas on the upper

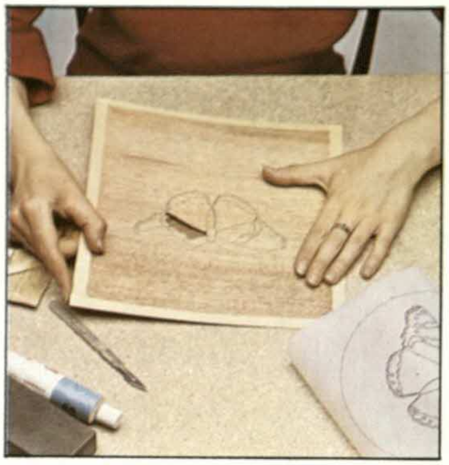
Left: early 17th century cupboard is a fine example of pictorial marquetry.

Right: marquetry place mats with a butterfly motif. Designed by Clare Beck.

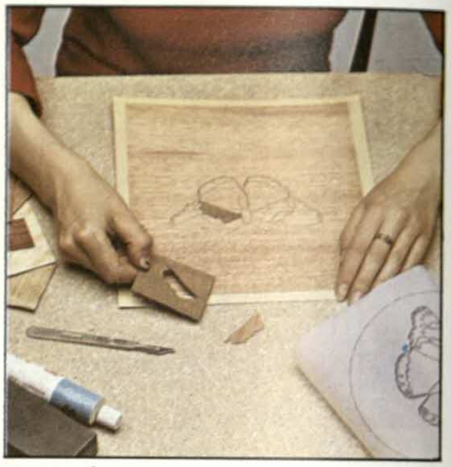




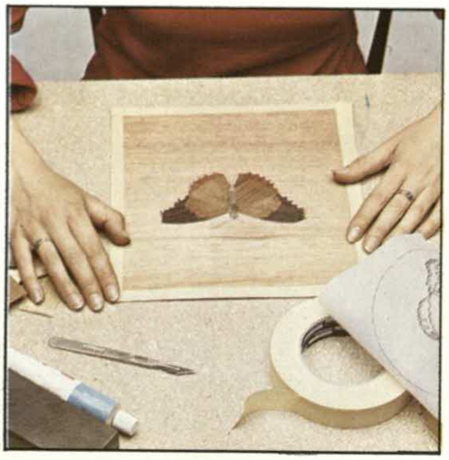
1. *Transfer design to background veneer.*



2. *Position teak veneer behind window.*

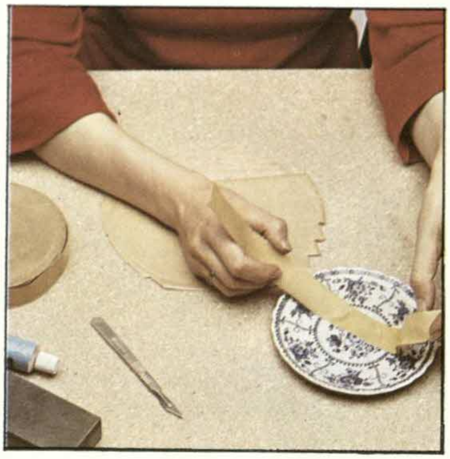


3. *Teak cut out and placed in window.*

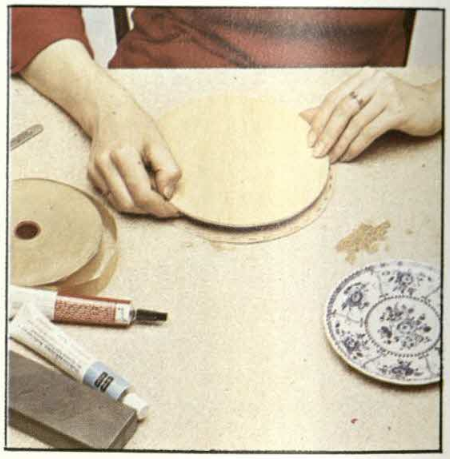


Steve Bicknell

4. *All veneers cut out and in place.*



5. *Cover front of design with gum strip.*



6. *Glue plywood back to veneer design.*

wings and the black diamond shapes on the lower wings (fig.1).

☐ Turn back the tracing paper and cut out the first piece of veneer. Start cutting at the centre of each wing and work outwards to the tip. Then cut from top to bottom of the butterfly. Leave the body until last.

Note: follow the traced line as closely as possible, using short cutting strokes.

☐ Choose the veneer for the area which has been cut out. Here, teak has been used. Position the teak behind the 'window' and fasten with masking tape (fig.2).

☐ Using the edge already cut in the background veneer as the stencil, score around the edge of the teak veneer. Remove the veneer from the back and cut out completely.

☐ Place the cut-out piece into the 'window' (fig.3). The pieces should fit closely. Hold them in position with a few strips of masking tape placed at the back.

☐ Cut out the area next to the one already cut. Place the selected veneer (Madagascar rosewood) behind the 'window' and cut as before. Continue in this way until all the main pieces for the wings and body are cut and in place (fig.4). Do not rush the job.

☐ Very delicate areas, such as the edges of the wings, can be glued directly into position with balsa cement. To do this, spread a little cement on to the cut edge of the background veneer and press in the small piece.

☐ For the antennae, make a thin cut with several strokes. Press in a sliver of dark veneer with some balsa cement attached to fasten it.

☐ Replace the carbon paper and tracing. Transfer the small white areas on the upper wings and the black diamond shapes on the lower wings on to the main veneers already fixed. Cut out as before and glue veneers directly with balsa cement.

The butterfly is now complete and, if held up to the light, any bad joins will be noticeable. These can be corrected by cutting and fitting a small sliver of matching veneer.

Wipe the picture with a damp cloth to get a clear idea of what the finished result will be. The wet veneer looks as if it has been coated with varnish. In this way you can test whether the veneers are contrasted in the best possible way.

Keep the butterfly pressed flat under a weight in order to prevent it from buckling.

The baseboard. Cut the plywood baseboard to the required size and sand the edges smooth with the fine grade glasspaper.

☐ The surface of the baseboard which is to be veneered should be roughened with a hack saw blade or a coarse grade glasspaper to ensure that the glue will adhere properly.

The underside of the mat can be either veneered or covered with felt. Use the circular baseboard as a guide and mark the felt with tailor's chalk. Cut 6mm ($\frac{1}{4}''$) inside the marked line. The felt is only attached after the design is attached and finished.

If using veneer, cut it 6mm ($\frac{1}{4}''$) larger than the baseboard. Glue the veneer underside first following the same gluing procedure as for the design.

Fixing the design

Remove the trace pattern from the front of the finished picture and replace it on the back.

☐ Trace the exact circle size of the mat on to the back using the tracing and carbon paper. This acts as a guideline when the baseboard and butterfly design are glued.

☐ Cut the background veneer 6mm (¼") larger than the outline.

☐ Cover front of butterfly completely with gum strip (fig.5). When it is dry dampen the small strips of masking tape on the back and remove. Make sure there are no traces of balsa cement on the underside.

☐ Spread the impact adhesive evenly over both surfaces and wait until it is touch dry.

☐ Position the baseboard over the underside of the design, making sure that the grain of the veneer is running in the opposite direction to that of the baseboard. Lower the baseboard carefully on to the design using the circle marked as a guideline, and press firmly. Turn over and press gummed area firmly (fig.6).

☐ Leave under a heavy weight or in a press, if available. A number of heavy books should do. Allow to set for 24 hours.

☐ When the glue has set, dampen the surface of gum strip and peel off.

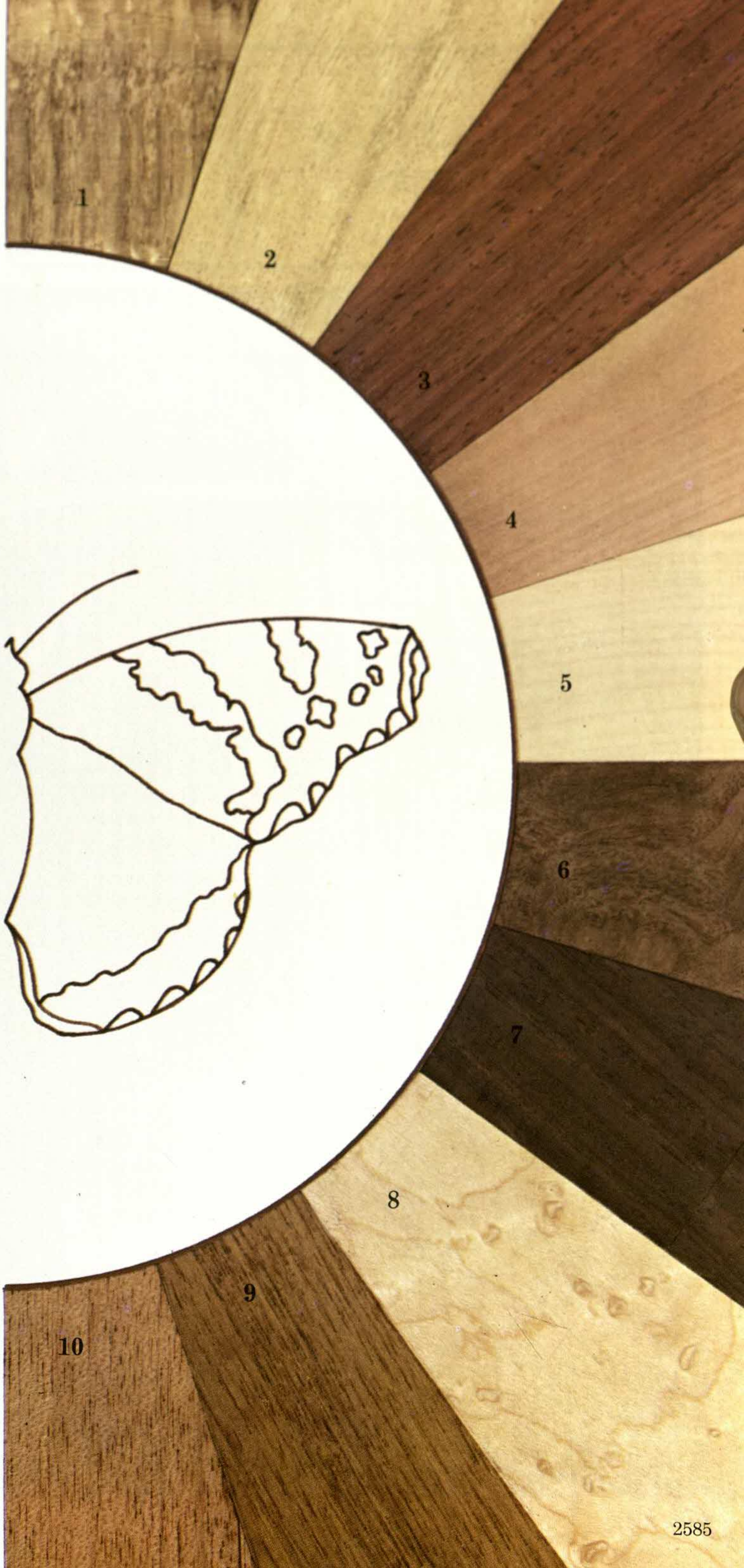
☐ Trim the veneer to the exact size of the baseboard.

☐ Check that the veneer has stuck completely. Blisters (small air pockets trapped under the veneer) can be detected by running your fingers lightly over the surface. To remedy these, slit the veneer along the grain over the blister, push in some more glue and apply pressure.

Finish

If there is a lot of variation in the thickness of the veneers, use a cabinet scraper to level the surface. This must be done carefully. Final smoothing is done with garnet paper starting with the grade 4/0 and finishing with grade 9/0. Wipe the surface with a damp cloth to remove the dust.

The wood is now ready to be sealed. For items such as table mats, which need to be heat resistant, use either Furniglas Hardset or a plastic coating such as made by Rustin's. Follow the manufacturer's instructions. If a felt underside is used on the baseboard it can now be attached with impact adhesive. Apply the glue and immediately press the felt down firmly on to the baseboard. Leave under a weight overnight.



Trace pattern for butterfly design. As the butterfly is symmetrical only half has been given. The veneers used in the design should have enough colour and grain contrast to emphasize the smaller sections of the butterfly.
1. Oak. 2. Obeche. 3. Padouck. 4. Pear. 5. Sycamore. 6. Burr walnut. 7. Bombay rosewood. 8. Birds eye maple. 9. Teak. 10. Mahogany.

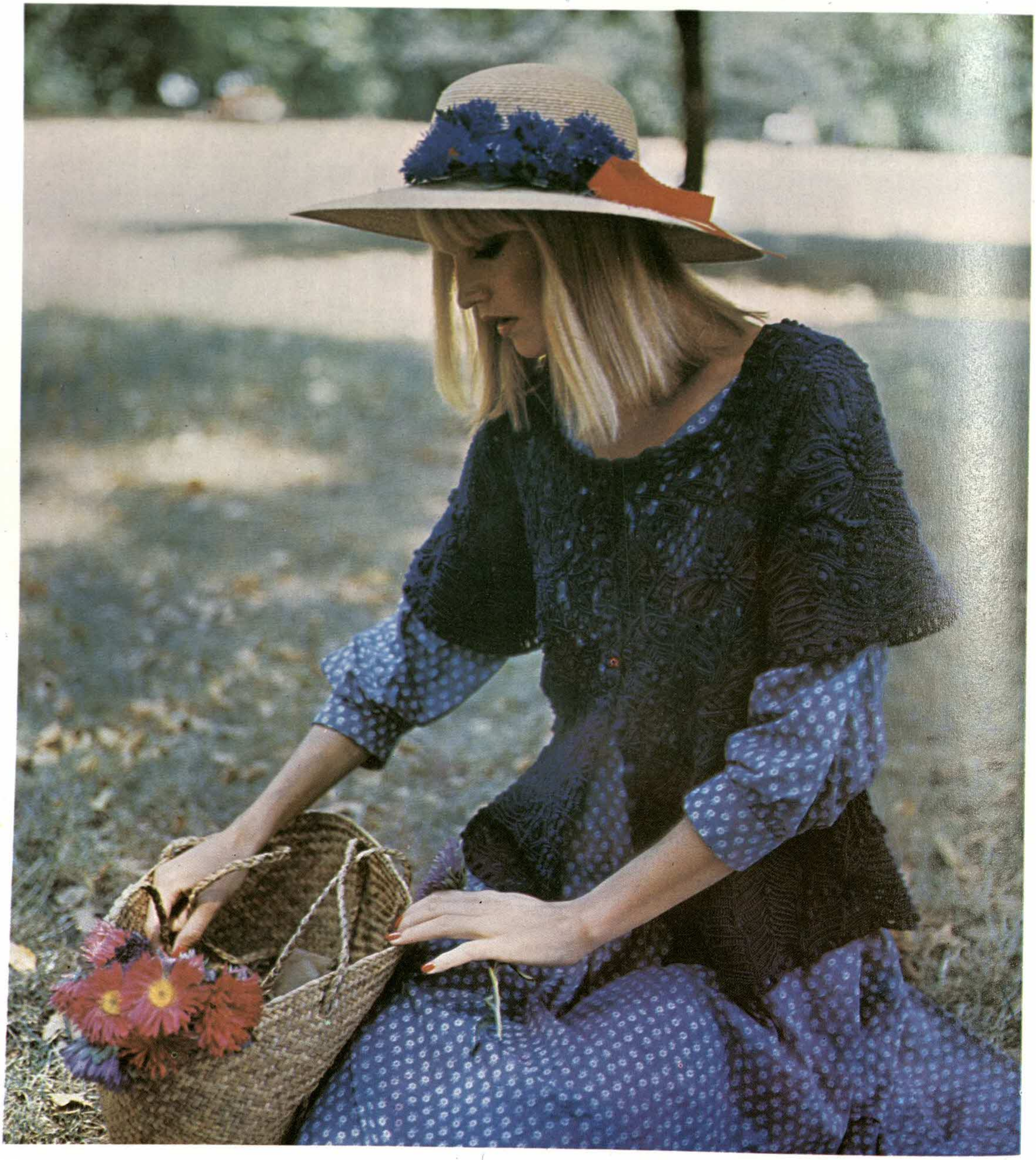
Trevor Lawrence

Beautiful lacy garments

Yarn — macramé 10

Macramé is a fairly simple method of making a garment with the elaborately webbed characteristics of lace. The possibilities are limited only by the amount of time you are prepared to spend on it.

Like knitting, each section of macramé lace is worked to a pre-determined shape, although there is no need to have a set of instructions worked out to your size. This is because the



Jeany

macramé is worked on a board over a paper pattern of the desired shape and the threads are tied on or off and the knots are manipulated as necessary to fit.

If you are experienced at macramé, this technique should not be difficult to do although it does require preliminary experimenting.

The pattern

The sections of macramé needed to make up the garment can be based on a dress pattern designed for fabric. Choose a style which is close fitting and has a minimum of darts.

Preparing the pattern. Because the macramé is inclined to be stretchy, the pattern should be prepared carefully as follows:

☐ Pin all the pattern pieces together to make half a paper garment. Try it on carefully and fold out as much of the paper as necessary to make it close fitting. Pin and secure excess with adhesive tape.

☐ Unpin the seams, leaving pins in any darts. Cut away the seam allowances, leaving just the basic shapes (you do not need seam allowances on the macramé because the sections will be oversewn or crocheted together).

☐ If you are using a commercial paper pattern which is on fragile paper, it is advisable to trace each section on to dressmaker's tracing paper, reversing pieces as necessary for left and right sides. Make sure that the grid lines on the paper match at the edges of sections to be joined.

Equipment

Board. Each garment section is worked separately on a board which must be large enough for the biggest pattern piece and soft enough for pins to be stuck in it—softboard (notice board) or a cork mat are both suitable.

Pins. Although you can use dressmaking pins to shape the work, they are not really to be recommended because they are not strong enough. Instead it is better to use macramé pins, or butcher's pins or loop-headed brass pins of the type available from stationers.

You will also need a fine crochet hook, a pair of scissors and a quantity of small rubber bands such as those used by florists.

Materials

Garments made from macramé tend to be heavy, so choose as fine a thread as practical. However, it should be remembered that the finer the thread the longer it takes to work a given area.

One of the most pleasant threads to work with is a mercerized crochet cotton because it is firm and glossy. The jackets shown were both made in a No.3 mercerized cotton, although a finer cotton could be used for delicate macramé decoration.

Dish-cloth cotton is fairly cheap but tends to stretch. String vest cotton can also be used provided it is pre-shrunk. For winter-weight garments you could use rug wool or knitting yarn but these are less easy to knot than the cotton threads because they slide less.

Designing the macramé

The principles of designing macramé garments are not unlike those used for picture making (Macramé chapter 9, page 2194). Although you can plan the work to a limited extent on paper, with macramé of this nature it is best to allow the design to develop and grow as you are making it. However, it is still advisable to have some sort of guide to knot placement and row level. Even if your design is to be a series of stripes like a sampler, you should mark these out on the pattern first so that the stripes match on the sections when they are joined.

If you are making a garment such as a jacket where you want the left and right sides to match, it may help to note the number of knots in a specific area and the number of rows and the positions of them on the pattern piece (as you work the first side) so that you save time when working the second side. If you are planning a complicated motif you will save time and perhaps a lot of frustration in having to unpick it if you work a sampler first. This will be a useful guide to size, and you will be able to judge if it needs modification when applied to the full design.

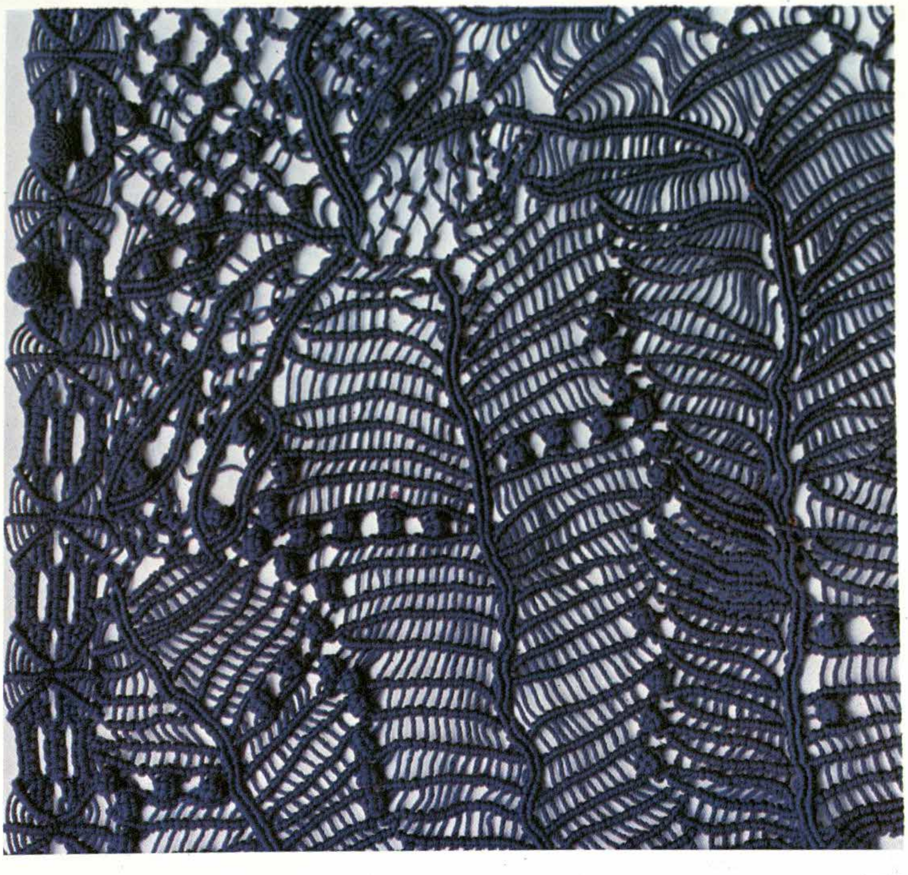
Working the macramé

☐ Place one of the pattern pieces on the board and fix in position with sticky tape.

☐ Start by making a firm outline of the shape (excluding the lower edge) on to which you can set the working cords. This outline can be formed from a strip of flat knots (made from two or four doubled strands of yarn), a chain of crochet or a simple macramé braid of the type shown in Macramé chapter 5, page 628.

☐ Pin the outline cord round the edge of the pattern and set on the working cords at the top edge. Keep the working cords tied in bundles secured with rubber bands.

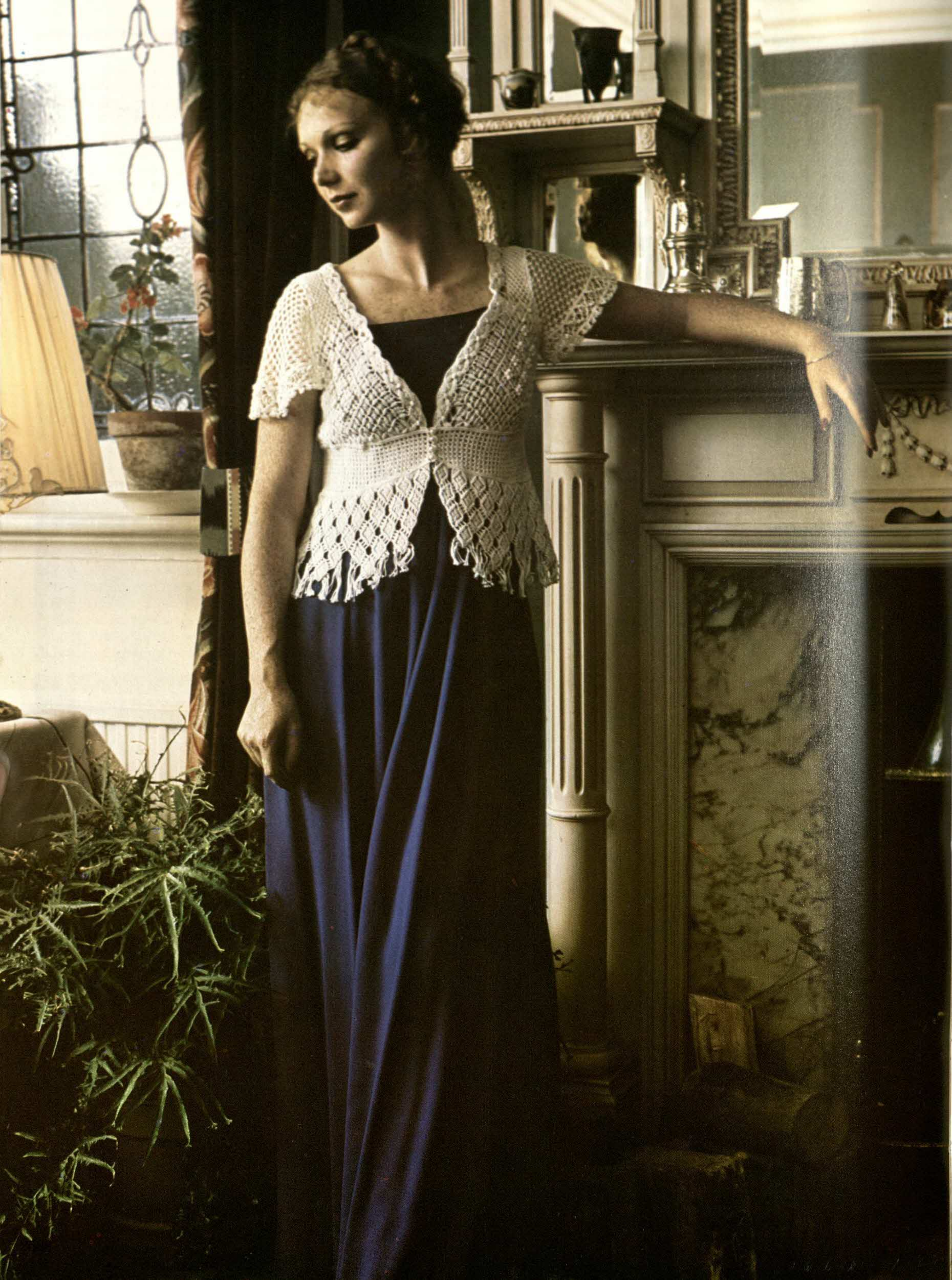
☐ Start working the macramé from the top downwards, keeping to the shape of the pattern by pinning the working cords to hold them in place. Add more working cords as necessary and link the edge cords to the outline cord at intervals by knotting round it.



Left: lacy jacket, designed by Glenda Marsh, and worked entirely in macramé with a fine crochet cotton.

Right: a detail of the jacket.

Jeany



Where you wish to reduce the size of the macramé, you can either work the knots more tightly together or tie off some of the working cords. Where you wish to increase the width, add more cords or work the knots with more space between them. Alternating flat knots (Macramé chapter 7, page 1076) are useful here.

White jacket

The outline cord of the white jacket in the photographs is worked on eight doubled cords ie 16 working cords. These are formed into diagonal cording and knotted chains, interspersed with flat knots and blackberry balls (see box).

Front panels. The shoulder sections are formed from alternating flat knots which lead into crosses of diagonal cording centred with flat knots.

Back panel. The main feature of the back panel is the twine motif which is worked on its own before the rest of the panel is filled in. The solid parts of the motif are formed with vertical double cording (Macramé chapter 8, page 2181), using separate cords tied on for this purpose. The more open sections are made with diagonal bands of cording interspersed with short chains of half hitch knots. Where the open sections meet the solid curves, they are corded across to the other side.

The remaining sections of the back panel are formed mainly from groups of four knotted chains, caught at the centre of each group with a flat knot. Each group is edged with two rows of horizontal double cording.

There is a row of blackberry balls, flat knots and double cording running down each side to separate these central sections from the side sections which are worked in corded crosses as the front panel. All these are connected to the twined motif by linking the cords in to the picots of the vertical double cording.

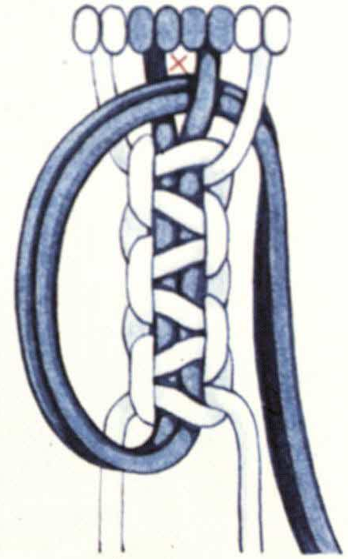
Waistband. This is a firm fabric made by close flat knotting, linked on every second knot.

Hip section. This is worked after the front sections and back are oversewn together to keep the continuity of the design. The diamond-shaped lozenges of the section are made from double rows of diagonal cording centred with four flat knots. The diamonds are linked together with four knotted chains on each side.

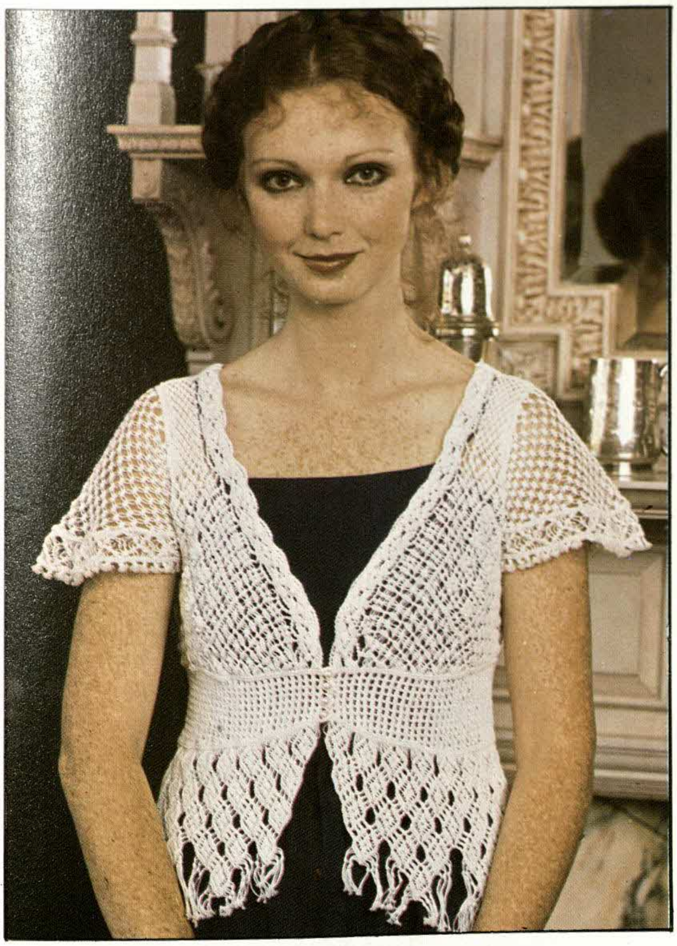
Sleeves. These are made from loose alternating flat knots finished with a band of twisted diagonal cording.

Blackberry balls

Work a series of three or four flat knots, then thread the two centre threads from front to back through the work above the first knot (point X). Pull up until a little blackberry-shaped ball is formed. Work one more flat knot to hold the ball in place.

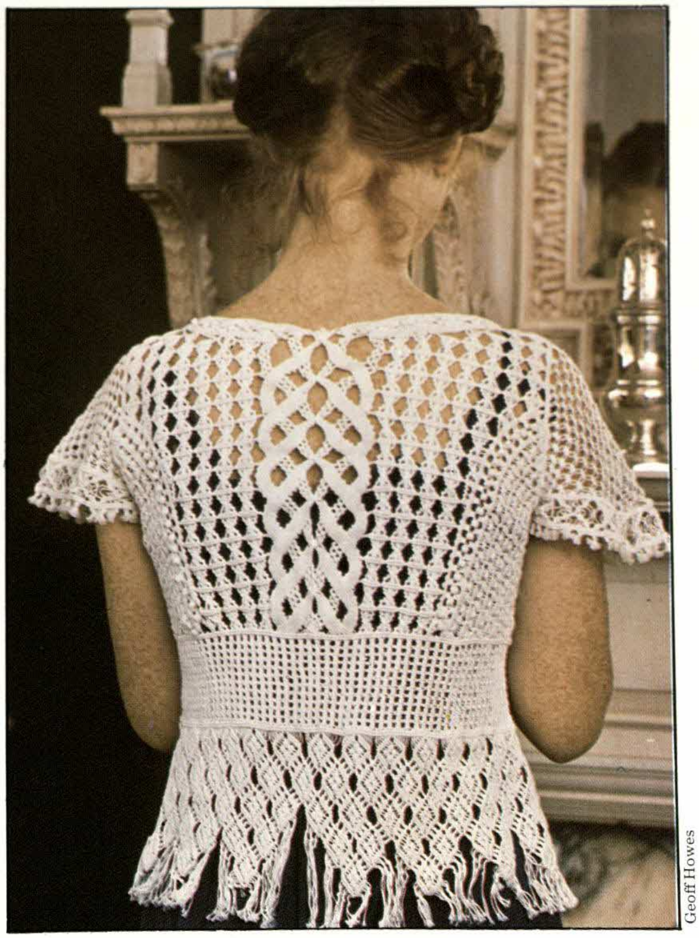


Coral Mula



Geoff Howes

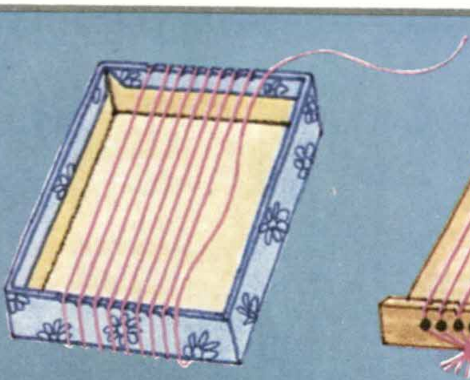
The side panels were knotted into the twined centre motif.



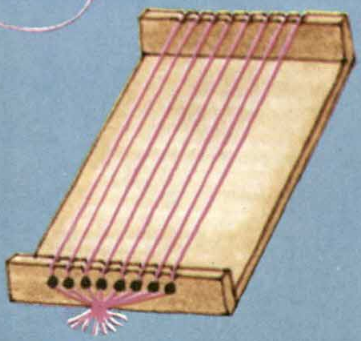
Geoff Howes

Blackberry balls give an extra dimension to this jacket.

Bead weaving on a loom

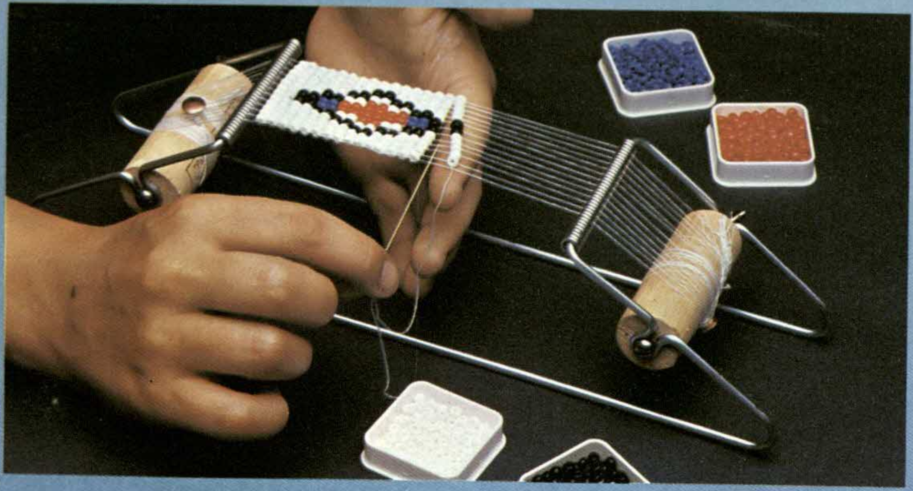


1a. *Simple cardboard loom with notches.*



1b. *Wood loom with nails.*

Victoria Drew



Steve Bicknell

Metal loom with separators for warp threads and rollers for winding work.

Weaving beads on a loom is similar to fabric weaving. The warp threads, ie the ones going lengthwise, are stretched on to the loom and the weft, ie the threads going from side to side, are threaded in and out of the warp. One bead is caught up between each warp thread to produce flat strips of beadwork with the beads lying in parallel rows. On the finished work, none of the warp or weft threads are visible between the beads.

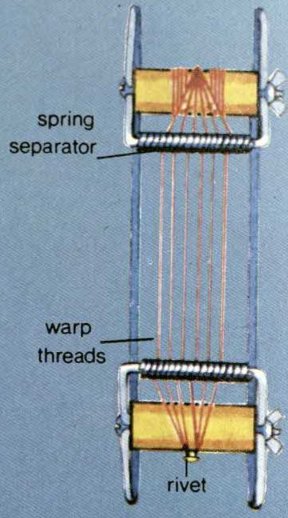
The loom

Bead weaving looms can be made at home from a cardboard box with cut notches or wood and nails (fig.1) and these are perfectly adequate for weaving small pieces of beadwork.

If you want to weave long pieces it is necessary to buy a loom which enables you to wind the work on as it progresses. There are two types available: a wooden loom and a metal loom. The metal loom has rollers at each end which enable you to wind the work backwards and forwards quite easily. On a wooden loom the work can be wound on, but not as easily as on a metal loom. The instructions given in this chapter apply to a metal loom.

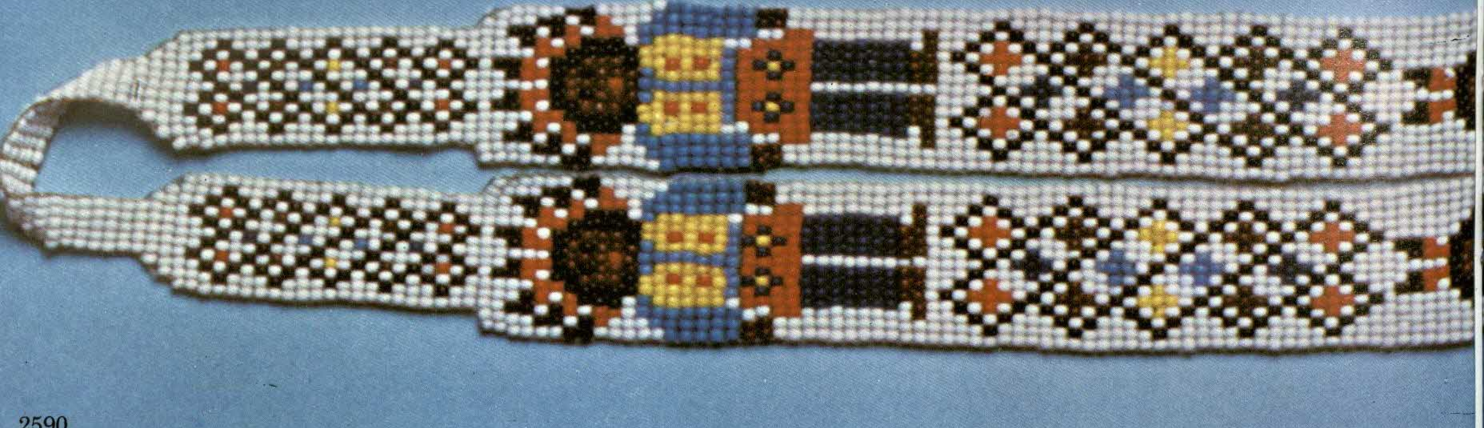
Setting up. Each warp thread should be 45cm (18″) longer than the finished work is to be. The number of warp threads should be one more than the number of beads which will be in each row. A piece that is nine beads wide will need ten warp threads.

First the warp threads are placed side by side and joined together at each end with a knot. One end is secured to the rivet on one of the rollers, and the warp threads are wound on to this roller until the knot at that end can be attached to the roller at the other end.



Coral Mula

2. *Details of a metal bead loom.*

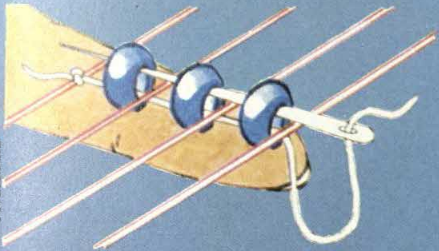


The threads are then spaced out over the separator, one thread in each groove. The knot is secured to roller rivet (fig.2).

The width of the bead loom obviously limits the width of the beadwork that can be made on the loom. The metal loom has separators for 35 threads which means that 34 beads is the maximum width that can be made. Many strips of 34 beads wide could be made and sewn together side by side to provide a wider strip. Very long pieces can be made by winding the work on to the rollers, and by joining strips end to end there is really no limit to how long a piece can be made. The warp on a home-made loom can be set up as shown in fig.1.

When the warp is on the loom, the weaving can start. A beading needle is threaded and the thread knotted to the outside warp thread on the left-hand side. The number of beads required for the first row is threaded on to the weft thread and passed underneath the warp threads.

With the other hand, one bead is pushed up between each warp thread and the needle is passed back through the beads, over the top of the warp threads, thereby securing them to the warp (fig.3).


Coral Mula

3. *Passing the needle round the end warp thread and back through the beads.*

To wind the work on as it progresses, the screw at the side of the roller is loosened and the roller turned. The warp does not have to be slotted into the separator again as the beadwork already woven will space the warp correctly.

Kim Sayer

Woven bead necklaces, inspired by patterns of American Indians.

Indian necklace

Bead weaving is a traditional craft of the American Indians. This necklace is based on the colours and designs used by them for centuries to make jewelry and other decorative objects.

You will need:

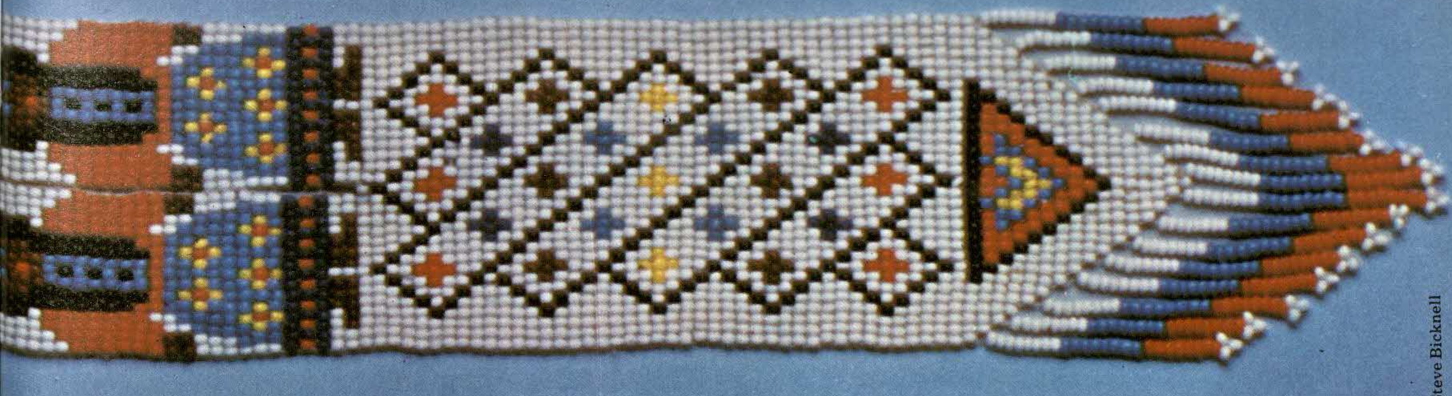
Beeswax.
Beading thread such as Drima made by Coats.
2 beading needles.
Bead loom.
Glass beads size 10 (about 1mm ($\frac{1}{16}$") diameter) in the following colours and amounts:

57gm (2oz) white.
28gm (1oz) black.
14gm ($\frac{1}{2}$oz) red.
14gm ($\frac{1}{2}$oz) dark blue.
14gm ($\frac{1}{2}$oz) yellow.
14gm ($\frac{1}{2}$oz) light blue.
14gm ($\frac{1}{2}$oz) brown.

In the instructions **w** = white, **r** = red **b** = dark blue.

☐ Thread the loom with 32 warp

Work the Indian necklace from this detailed photograph.


Steve Bicknell

threads 81cm (32″) long as explained earlier.

☐ Thread the needle with a long thread, double it and rub with beeswax.

☐ Tie it to the sixteenth warp thread from the left-hand side. This is where the weaving starts to create the V shape at the bottom of the necklace. (The fringe is made later.)

☐ Following the photograph thread one **w** bead on to the warp thread.

☐ Pass the thread down between warp threads 15 and 16 and up between threads 17 and 18 (counting from the left-hand side).

☐ Push the **w** bead up between threads 16 and 17 and thread the needle through it.

☐ Thread 3**w** beads, pass the needle down between threads 14 and 15 and up between threads 18 and 19, push the beads up between the warp threads and pass the needle back through them.

☐ Continue in this way following the pattern in the photograph.

☐ Wind on the work when necessary. To divide the threads after row 59 has been worked, move 16 warp threads along the comb at the top which separates the warp threads and continue weaving up one section.

☐ When you have finished one side, start the other side using a new weft thread tied to the 17th warp thread.

☐ When the necklace narrows, move the surplus warp threads slightly away from the weaving by hooking over the spring separator and continue the pattern. The warp threads will later be fastened into the beadwork.

The fringe. When you have completed the bead weaving, roll the beadwork back on to the top roller until the beginning of the necklace is sitting between the separators.

☐ Cut the first warp thread as close to the knot as possible and thread it on to the needle.

☐ Thread 8**w**, 8**b**, 8**r**, 3**w**. Pass the needle back through 8**r**, 8**b**, 8**w**.

☐ Pass the needle through a few beads on row 15 and finish off with a slip knot (see Beadwork chapter 10, page 2430).

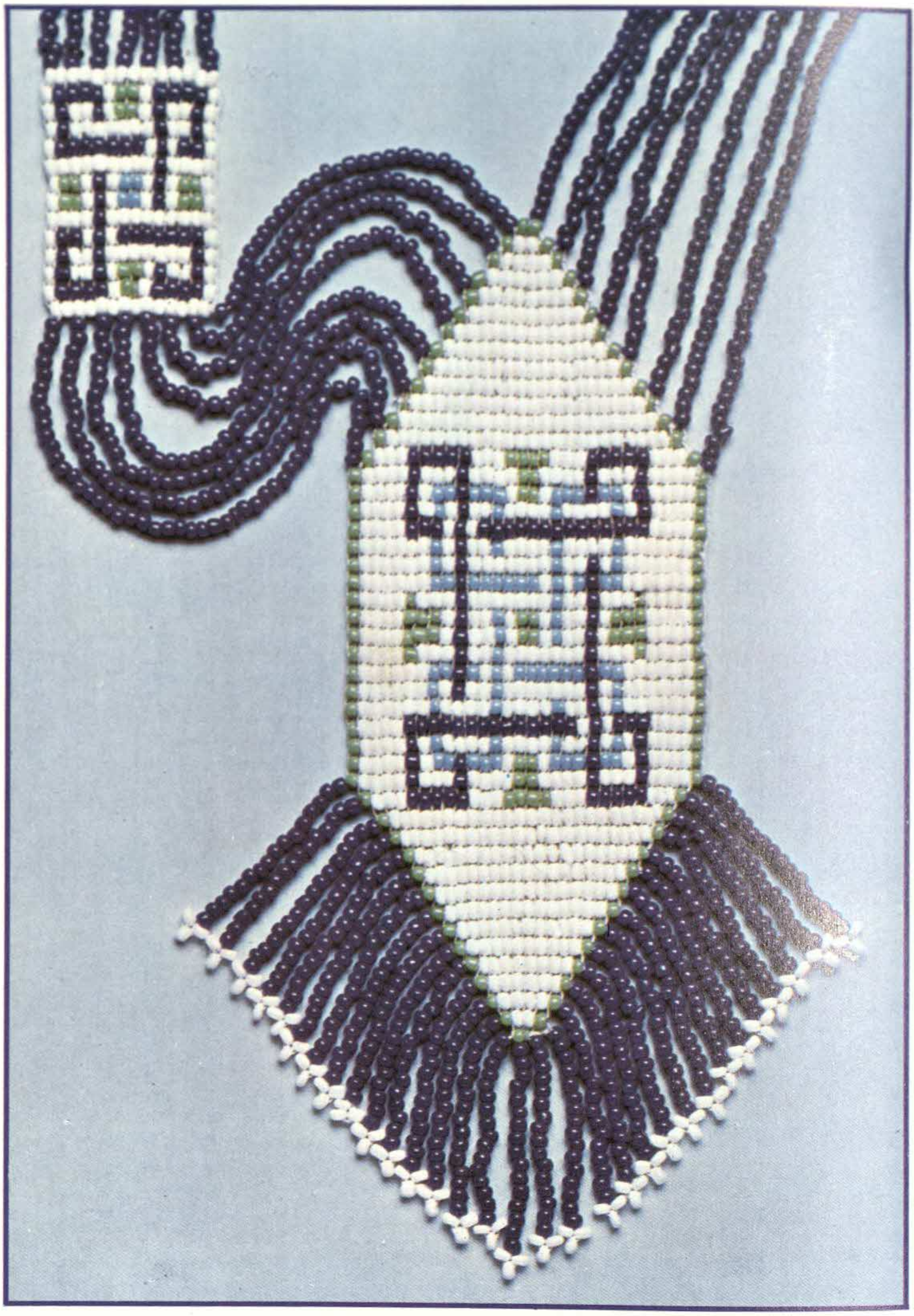
☐ Repeat this with each warp thread.

Finishing off. There are two methods of joining up the two ends. The first method involves weaving each warp thread into the other side of the necklace and securing with slip knots. This gives a very neat reversible finish.

The second method is easier but not neat on both sides.

☐ Ask someone to hold the two ends of the necklace together while you tie one warp thread from each side together to form a row of knots. Dab each row with colourless nail varnish.

☐ Glue a piece of suede or felt to the row of knots to cover them up and strengthen the join.



Steve Bicknell

Work the blue and white necklace from this photograph by counting the beads and rows. Designer Marjory Murphy.

Blue and white necklace

This is made from three solid pieces of bead weaving held together with strings of beads.

You will need:

Bead loom.

Beading needle.

Beeswax.

Beading thread such as Drima made by Coats.

Glass beads size 10 (about 1mm ($\frac{1}{16}$″) diameter) in the following colours and amounts:

85gm (3oz) dark blue.

28gm (1oz) white.

14gm ($\frac{1}{2}$oz) green.

14gm ($\frac{1}{2}$oz) light blue.

In the instructions **d** = dark blue, **g** = green, **w** = white.

☐ Thread the warp on the loom as described earlier. You will need 31 warp threads each 81cm (32″) long.

☐ Wind 25cm (10″) of the warp threads on to the bottom roller before starting to weave—this will be used later for the fringing.

☐ Thread a needle with a long double thread, rub it with beeswax and tie to the 15th warp thread counting from the left-hand side.

☐ For the point, thread 2**g** beads and push the needle down between the 14th space from the left and up through the 17th. Push the beads up between the warp threads and thread the needle back through them.

☐ Thread one **g** bead and pass the needle down through the 14th space and up through the 13th space. Hold the bead between the 14th and 15th warp threads and pass the needle back through the bead. This bead is now the first on the second row.

☐ Thread the remaining beads of the second row, ie 2**w** and 1**g**, and secure between the warp threads in the usual way, passing the needle through all four beads.

☐ Continue weaving following pattern shown in photograph opposite. Complete 32 rows.

☐ To decrease for row 33, pass the needle back through the first **g** bead of row 32. Now move the outer warp threads slightly away from the main body of the work and weave as before on fewer warp threads. As fewer beads are threaded for each row the work will decrease on both sides.

☐ Repeat this method for decreasing for each row.

☐ When you have finished row 46, fasten off the thread in the row before by making slip knots.

☐ Remove the top of the warp threads from the loom and on to each pair of warp threads starting from the left or right-hand side thread **d** beads in the following order and amounts: 48, 44, 41, 39, 38, 34, 32, 30 (on to one warp thread), 30, 32, 34, 38, 39, 41, 44, 48. This makes sixteen ropes altogether.

☐ Replace the warp on to the loom.

☐ Thread a needle and tie the thread to the 15th and 16th warp threads. Weave the square on the left of the necklace following the pattern. Use warp threads 15 and 16 as one.

This tight-fitting, striking bracelet can be made on a warp of shirring elastic so that no fastening is needed.

☐ Weave the square on the right-hand side on the remaining 15 warp threads.

For the fringing roll the beadwork back on to the top roller until the end of the necklace is sitting between the separators.

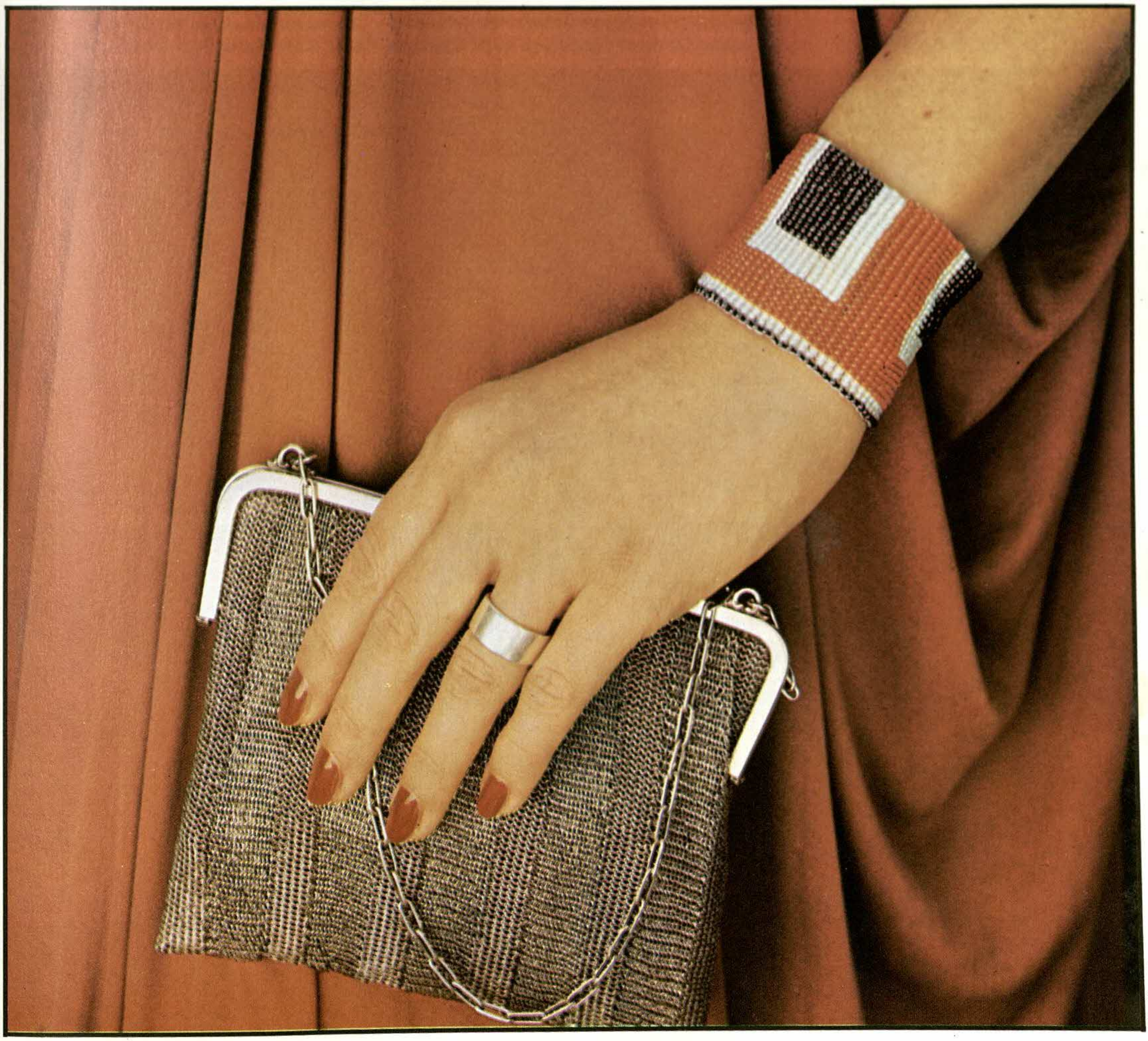
☐ Release one warp thread at a time from the knot and thread on to this warp thread 16**d** and 3**w** beads.

☐ Pass the needle back through the 16**d** beads and fasten the thread by making a series of slip knots into the beadwork.

☐ Repeat this for each warp thread.

To finish off. Remove the necklace from the loom, and on to each pair of warp threads put sufficient **d** beads for the required length. Tie the matching warp threads together and dab the knots with colourless nail varnish.

☐ Thread the ends through a few beads and trim.



Kim Sayer

How to make stage scenery

Colour — paint 39

Stage scenery as we know it dates from the 16th century when lavish court spectacles were produced in Italy and France. Canvas was fixed over wooden frames and painted to represent architecture. Often this was built in elaborate perspective to suggest larger spaces such as streets receding into a vanishing point.

Many theatres had a permanent standing set against which every kind of play would be staged. This was thought to resemble the classical staging of Greek and Roman theatres.

Later, Inigo Jones introduced court entertainments to England. These were produced on stages with riots of woodland glades, gods descending in chariots, sea monsters and wave effects and glittering views of heavens with clouds. These were all combined with clever mechanical effects so that the scenery would be changed in full view of the audience.

In the 18th century, stage sets retained many of these ideas and even interior scenes would be composed of backcloths, wings and borders painted to deceive the eye into seeing the complete picture.

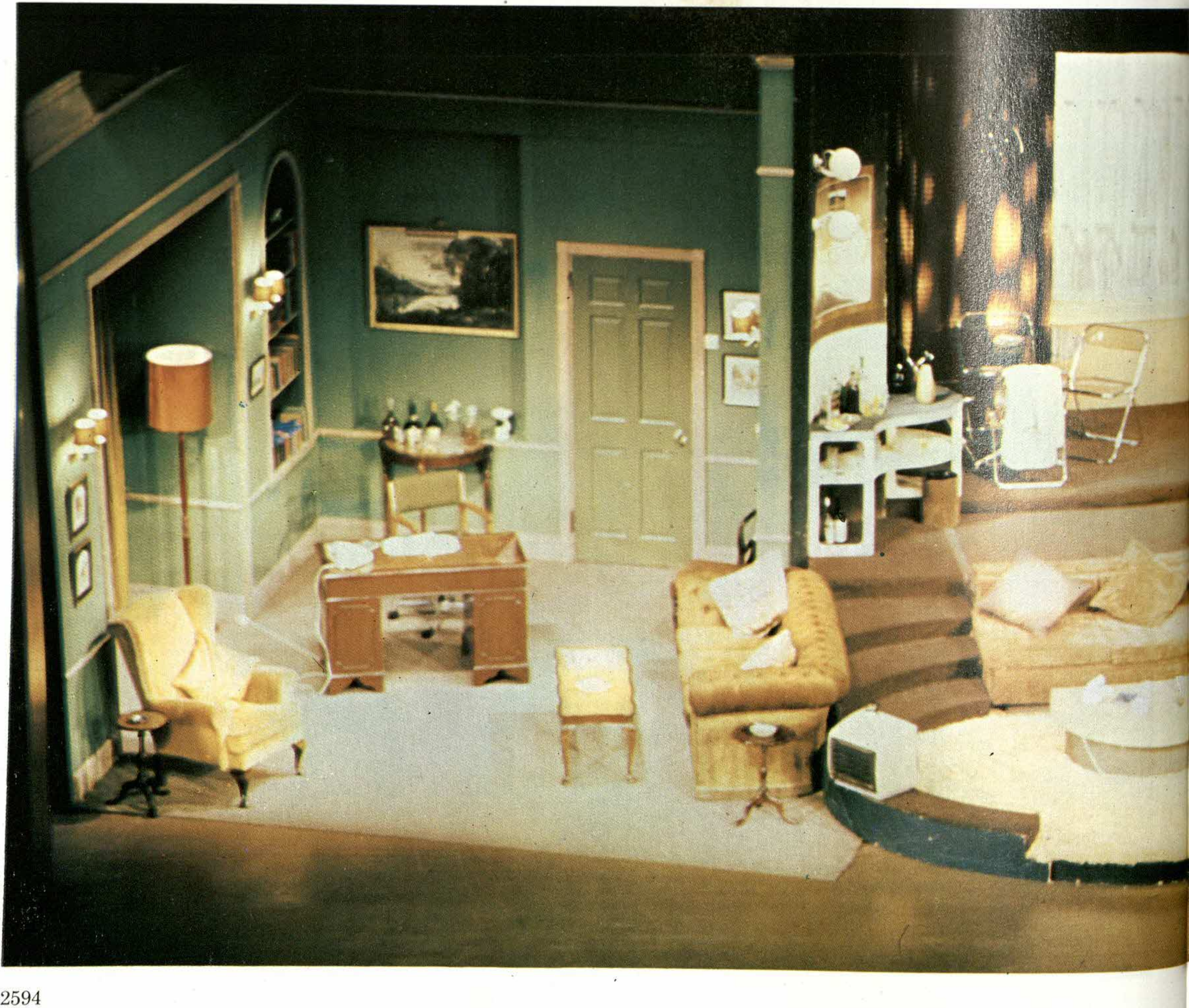
A box set—a complete room with practical doors and windows—did not appear until the early 19th century. Today stage scenery is built much as it was three hundred years ago. Canvas is stretched over wooden frames and painted to represent whatever the play requires.

Making a flat

Conventional scenery generally consists of a setting of flats. Basically a flat is made by making a frame, usually of 7.5cm x 2.5cm (3″ x 1″) timber and stretching canvas over it.

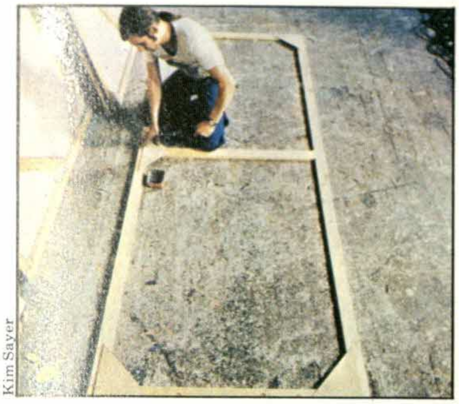
Hessian makes a good alternative to canvas. It is particularly useful for tapestry effects, the rough weave highlighting the paint.

A conventional set made of a series of flats with doors and windows built in.

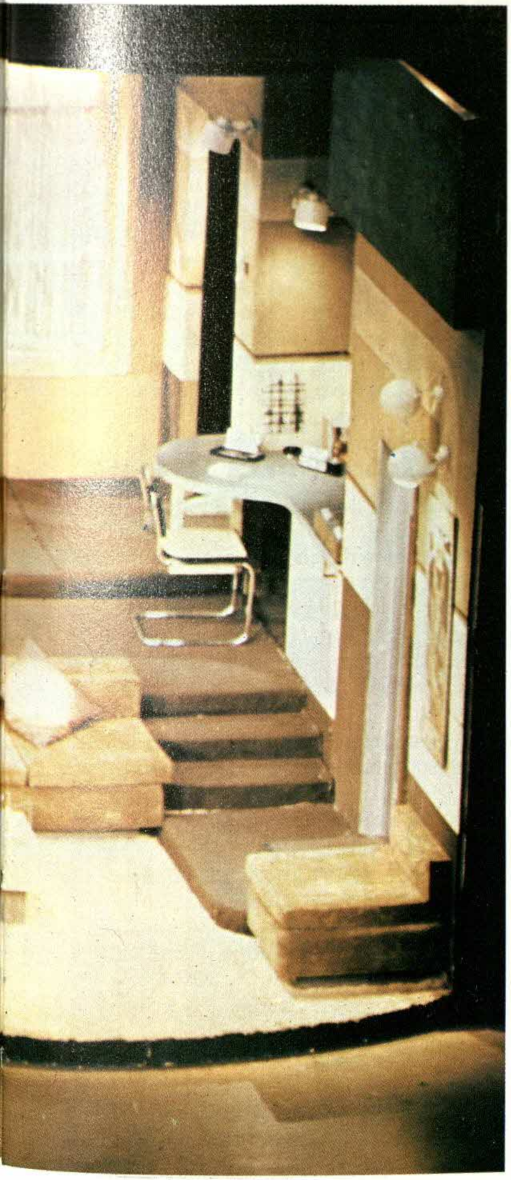


Geoffrey Frosh

The canvas is glued flat over the frame and tacked down. Construction can be quite simple—the corners of the flat need not have a mortise and tenon joint, but can be simply 'plated' together with a 6mm (¼") plywood triangle which is glued on the back and then nailed home (fig.1). Using this method you can remove the plates and alter the flats if necessary, shortening them or inserting an opening.


Kim Sayer

1. *Joint plated with plywood triangle.*



If you are putting on a play you may wish to keep the scenery and use it again. Thus it is quite useful to work to a stock size so that extra pieces can be added for other productions.

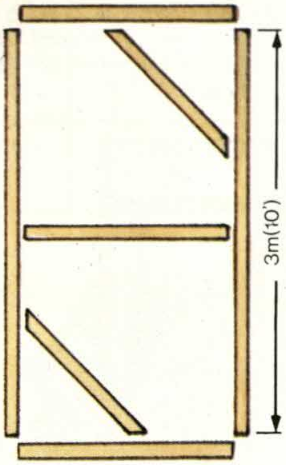
To make a flat 3m x 1m (10' x 3') you will need two pieces of timber for the sides, a top and bottom rail and a batten to strengthen the flat and help to prevent it going out of square.

☐ The top and bottom rails should be cut to the exact length required—in this case 1m (3').

☐ The side pieces are cut, less the thickness of the top and bottom rail of wood. Measure the thickness of the piece of wood, double it and deduct it from the side pieces.

☐ The centre batten is again measured less the thickness of the side pieces, as it is placed between them.

☐ It is sensible to put braces on bigger pieces to give added strength (fig.2).



Paul Williams

2. *Braces give strength to the flat.*

☐ Lay the timber lengths on the floor and square up the frame by using a T-square. Glue the plywood plates (these should be about 20cm (8") long on the right angle edges) 2.5cm (1") from the edge using glue such as Evo-stik and nail them down with 2.5cm (1") nails.

☐ For the centre batten the plate should be the same shape but applied horizontally (see fig.1).

Canvasing a flat

☐ When the glue on the plates has dried, turn the flat over.

☐ Cut a length of canvas 7.5cm (3") longer and 7.5cm (3") wider than the flat (fig.3).

☐ Lay the canvas over the frame and, using a stapler, staple the canvas round the inside top edge of the frame, each staple about 10cm (4") apart. Stretch the canvas gently with each tack (see fig.3).

3. *Cut the canvas longer and wider than the flat before stapling.*

Before making a stage set a cardboard model is extremely useful. When you are satisfied with layout and colour you can proceed with the real set.

Kim Sayer

Kim Sayer

4. *Make sure the canvas is pulled taut when stapling it to the flat.*

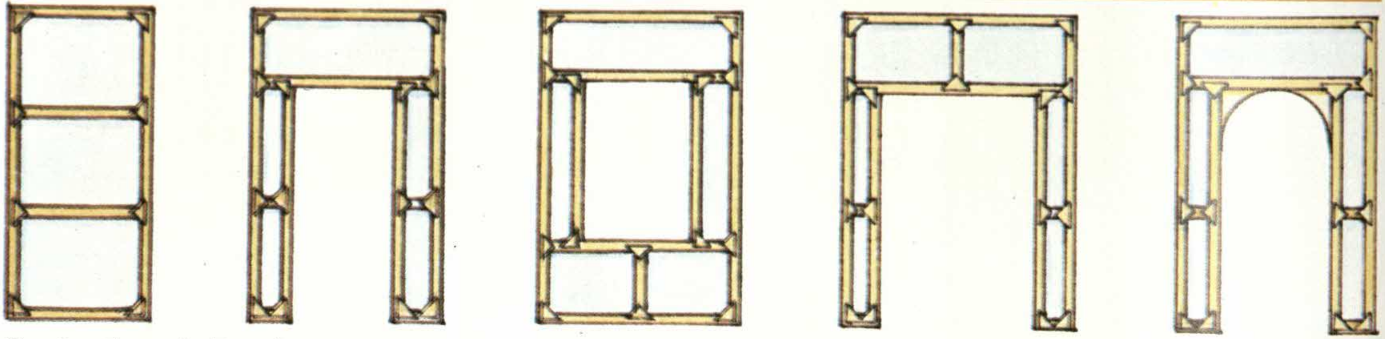
Stapling. Start by stapling one long edge. When this is complete, start in the middle of the opposite edge and work outwards and around each end (fig.4).

5. *Any excess canvas can be cut off in line with the outer edge of the flat.*

Gluing. Surplus canvas can be trimmed round the edge with a Stanley knife (fig.5). Fold the unstapled canvas back away from the wood all the way round the frame.

6. *The border canvas should be stuck to the flat with a strong glue.*

Using a strong glue such as Copydex or white woodworking adhesive, cover the flat (fig.6) and press down the canvas on to it. The glue must be allowed to dry before priming.



Paul Williams

Construction techniques for various flats: a conventional rectangle, a door, a window, a double door and an archway.

Priming the flat

Just as an artist primes a new canvas before beginning his work, so too must the flat be primed.

Mixing the primer. Make a size solution in an old metal bucket using 2.5kg (5lb) size to 4.5 litres (1 gallon) of boiling water. The mixture must boil before it is ready to use.

Allow the solution to cool a little, then pour half the liquid into another bucket and add sufficient powdered whiting (available from builder's merchants) to give the mixture a creamy consistency.

The primer can then be brushed well into the canvas and allowed to dry. It is important that the size solution is not too strong. If it is too strong it will tighten the canvas too much and eventually twist the frame of the flat.

Painting the flat

Scene paint is powder colour finely ground and mixed with a weak liquid size solution—a powdered glue which makes the canvas taut and prevents the paint from rubbing off. The size is most important; if it is too weak there are likely to be complaints from the actors that the paint has rubbed off on to their clothes.

Scene paint comes in a wide range of colours and can be bought from scenic suppliers. Most of the colours can be intermixed. Thus it is possible to achieve an enormous range of shades. The paints vary from the cheap 'earth' colours—ochres, browns, sienna and umbers to the more expensive pigments, notably some reds, blues and greens. It is economical to use and will keep indefinitely in powdered form. The paint is generally bought in powder form though it is possible to buy ready-mixed colours, which are more expensive.

Once the paint is mixed with the size solution it will go off in two or three days. If you are painting an entire set in one colour, make sure you have mixed sufficient paint or you may find you have mixed a complicated shade which you will be unable to emulate.

Scenic suppliers are very helpful and will recommend how much paint you will need for a certain job.

You will need:

0.5kg (1 lb) powdered glue size.
4.5 litres (1 gallon) boiling water.
2.5kg (5lb) powdered colour paint.
2 large metal buckets (large enough to hold 4.5 litres (1 gallon) plus the paint).
Cooker or large gas ring.
Large spoon for stirring.
Methylated spirit (optional).

This quantity will cover approximately 37sq m (400sq ft).

☐ While the water is boiling add the powdered size. Stir until it has all been absorbed.

☐ Remove from heat and allow to cool.

☐ When still tepid pour the solution slowly into a bucket containing the powdered paint. Stir until all the paint has been absorbed.

Warning: the paint looks several shades darker when in the bucket than it will once it has dried on the canvas. Some colours do not mix readily with the size solution. To remedy this, mix the powder to a thick paste with methylated spirit before adding the size.

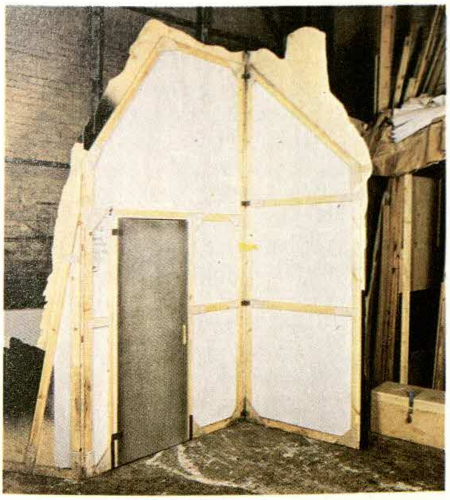
Once you have chosen and mixed your basic colour apply it evenly over the flats with a brush or roller. Allow it to dry before final decoration.

Stencils are generally used to decorate the flat once the basic colour has been applied. They are best made by using oiled paper (available from scenic suppliers) as this is quite stiff and will be more durable than ordinary paper. When choosing a design for your stencil make sure it is not too complicated or intricate as often very small details are not apparent from the auditorium and if the stencil is too delicate or thinly cut it might well break with frequent use.

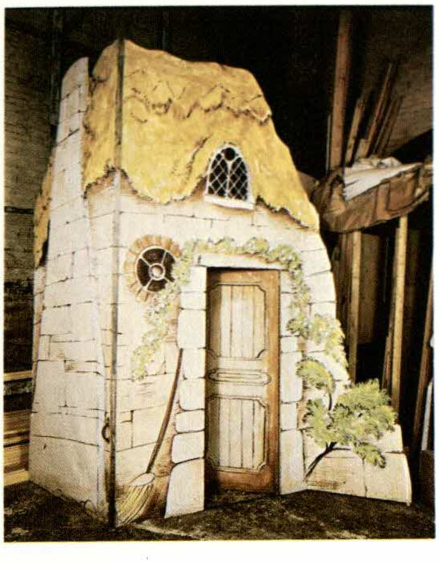
Mouldings and architectural details can either be painted on to the flat or the real thing can be glued to the flat. Door frames, window frames and picture rails if permanently attached to the scenery will limit its re-use.

When painting the mouldings on the flat apply a basic colour of wood, stone or plaster and then to emphasize the effect of light and shadow use lighter and darker tones for shading.

Profiling is sometimes necessary should you want free-standing scenery. Plywood shapes should be built on to the edges of the flat and canvased over (fig.7).



Kim Sayer



The pantomime peasant's cottage (right) was constructed from three flats (above) to form the house. The roof and chimney were added by profiling.

Joining and erecting flats

Often it is necessary to join two or more flats together.

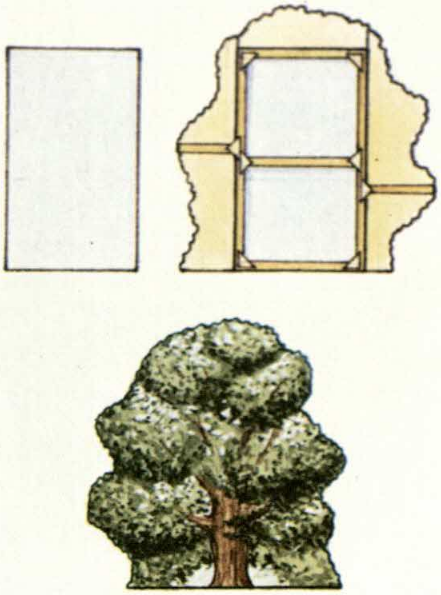
You will need:

Sash cord (the length of the flat for each flat to be joined).

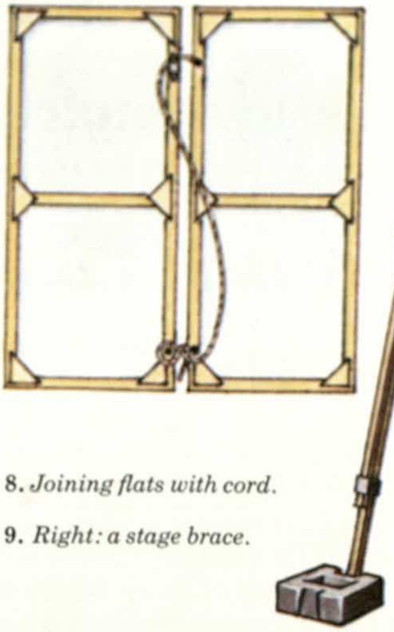
Two 10cm (4") screws.

1 cleat. 1 tack or small nail.

On the left-hand frame of the first flat 30cm (1′) from the top, nail or tack one end of the sash cord. On the right-hand frame attach the cleat 30cm (1′) from the top. Measure 90cm (3′) from the bottom on the left-hand frame of the first flat and screw in a screw allowing 2.5cm (1″) to protrude—do the same on the right-hand frame of the second flat. The sash cord should be hooked over the cleat then pulled tightly down and round the screw diagonally opposite on the first flat and across and around the screw on the second flat. The sash should then be knotted securely between the two screws. Fig.8 shows positioning.



7. *Battens extending from the flat are used to support plywood profiles.*



8. *Joining flats with cord.*

9. *Right: a stage brace.*

Paul Williams

Any number of flats can be joined together using this method or ordinary piano hinges if the joins are permanent.

If you are erecting a number of flats that are joined together and they are standing at angles to one another, usually it will not be necessary to have any other form of support. However, should you need to erect a single flat or flats that are joined together and standing flat you will need to use a stage brace—fig.9 (available from scenic suppliers).

Screw a screw eye into the frame of the flat at one third or more of the height of the flat. The brace hooks into the screw eye. Adjust the brace to a suitable length and secure to the stage either with a stage screw or stage weights (both available from scenic suppliers) if you do not want to permanently mark the floor.

Useful materials

Expanded polystyrene can be used to make bricks, stones, wall surfaces or columns. It is expensive to buy, but quite often you can find odd bits that have been used as packing material.

Polystyrene is easy to use. It can be cut with a thin bladed sharp knife or a specially obtainable heated wire.

Warning: expanded polystyrene is highly inflammable and is thus banned by many local authorities from use in public halls. If you are giving a public performance it is essential to see that your scenery and props meet fire regulations.

Cleaning, care and repairs

Any item made from straw, rush, cane and willow etc, will last a very long time especially if it is cared for. The biggest enemies are dirt, wood worm and dryness over a period of time. However, these need hardly be a problem if a few simple precautions are taken which will also prolong the life of the object whether it be a basket or a corn dolly.

Care

If a basket is very dirty with years of grime, or if it has contained muddy vegetables and the mud has crept in between the weaves, scrub it with a stiffish brush to get between the weaves. Use warm water and a mild soap. Do not use detergents on baskets as they are too harsh and remove the natural oils from the material.

Corn dollies that are dusty must be treated with great care. They will probably be very fragile by the time they need cleaning. Brush them very gently with a soft brush and warm soapy water—do not use a detergent. Once dry the corn dollies should look as good as new.

Rush work should not be placed in bright sunlight or the gorgeous green and orange colours will fade too quickly. Keep rush flower-arranging baskets in a dark cupboard when not in use. Make sure that they are quite dry before storing them or they will develop mildew (this applies to all baskets regardless of the material from which they are made). Rush work, such as table mats, can be washed in

Baskets such as these, whether chewed by pets or damaged by general wear, can be repaired to look as good as new.

Dick Miller

Dick Miller

lukewarm water using mild soap.

Willow is easily cleaned by leaving it out in the rain. Do this in summer and leave it for a few hours—this soft-water shower will tighten the work and make it look as good as new.

As willow is wood it is therefore susceptible to wood worm. Look out for the tell-tale signs—small holes—and if the willow is not too badly damaged, a liberal brushing with a proprietary insecticide will prevent further damage.

If a willow basket is fading in colour, give it a good brushing with brown shoe polish. This is especially good if the basket is dusty between weaves and needs brightening and is also suitable for willow furniture.

Willow which is very badly faded, usually because it has been subjected to continual strong sunlight or left outside in all weathers, can be rejuvenated with a wood stain or dye. There are a number of proprietary brands available, all are suitable but it is advisable to do a test piece first to check the colour.

Restored pet basket: damaged weavers were cut away and the dowels replaced and secured with new weaving.

Cane baskets sometimes go a grey colour. It cannot be removed but that is no reason to throw out the basket.

Wash and dry the basket first and then stain or dye it. Paint is also suitable and flower-arranging baskets are very effective in bright colours especially for seasonal decorations.

Babies' cane rattles, baskets and cradles may be scrubbed in very hot water to ensure complete cleanliness.

Repairs

Nearly all damage to baskets occurs at handles, borders and bases. Basket handles will break after extensive use, borders come undone and bases fall out from carrying too much weight—all these can be repaired or made new.

You do not necessarily have to have made the basket to be able to repair it. As long as you have some experience of the repair involved you should not find it too difficult. For example, if a handle needs replacing you can do it the way you know rather than doing it exactly like the original.

Handles

The usual reason for the handle of a basket giving way is because the bow ends are not put down far enough into the sides of the basket. If the bow ends are short they allow the handle to ride backwards and forwards in its socket. Unfortunately, over a period of time, this action breaks away the handle wrapping and eventually the handle bow pops out of its place.

To repair a handle, cut all the loose weaving or wrapping of the handle bow away and take out the handle bow (ie the stiff foundation of the handle).

Reinsert the ends of the handle bow but push them much further into the siding of the basket. If this means that the handle will really be much too low in relation to the basket, then make a new handle bow.

To make a handle use 10mm (⅜") handle cane (or cane similar to the bow being removed) slightly longer than the original.

Soak the cane and slype the ends. Push the ends well down into the old sockets and try to make each end reach nearly to the base of the basket.

The handle can now be wrapped (Basketry chapter 1, page 220) or, if you prefer, 'rope' it (Basketry chapter 5, page 725). Peg the handle to secure it.

Do remember that you do not have to put on exactly the same pattern as the original so, if you did not make the basket, there is no need to copy what someone else has done—do it your way. If you only work in cane and have a willow handle to repair, then do it with cane or use an enamelled wrapping cane that blends with the willow.

China teapots with cane handles which are broken can often be bought cheaply—repairing the handle is a simple matter. If the old handle is still present measure it to get the correct length and add on enough to form the long tongue which is bent round and back along itself before being wrapped (Basketry chapter 7, page 1106).

Borders

Borders are hard wearing but wear and tear will eventually take its toll, especially if a basket is handled often—bicycle and pet baskets usually become the most battered.

First soak the damaged part well, either by immersing it in water or, if this is not possible, cover it with a wet towel.

Undo as much of the border working as gently as possible. If you only undo part of the border, you will have to work the same border of the repair but if you undo the whole thing, you can put on any border you wish.

A lot of the stakes will break away—do not worry about this as it proves that the material is brittle and 'past it' anyway. Cut away any bits that are badly split, chewed, broken or otherwise damaged—discard them with any rotten bits. You will probably be left with a sloping area that needs building up to the original level.

Select similar sized bits of the appropriate material to replace any broken stakes.

Slype one end (the butt end if it happens to be willow) and insert it well down into the existing work. If the thick end stick of a pet basket has been chewed away (as was the case in the one illustrated) replace that also. Use a thick stick, cane or dowel for this.

Piece in any weavers needed to replace the siding. Do not worry too much about the appearance—when the repair is finished you will hardly notice it. Try to follow the existing weave whether it is slewing, randing, waling or pairing. When you reach the required height—that is, the level of the existing work—the next problem is the border.

Push new border stakes into the siding and nip them 6mm (¼") above the siding. Try to 'pick up' and use as much of the existing border stakes as possible. If the border is not continuous all the way round the basket, such as a pet basket, put on a 3-rod border as described for square work (Basketry chapter 8, page 1222).

The border on a bicycle basket usually disintegrates at the point where it is attached to the bicycle and the bottom often falls out from carrying too heavy a weight over a period of time. The border can be repaired as described—if it is a willow basket you do not necessarily have to use willow, you can make do with cane.

Bases

For the bottom, which is probably cracked and bulging, do not cut away any of the existing work.

Cut new sticks, similar in size to the existing ones and point the ends to make it easier to insert them into the work.

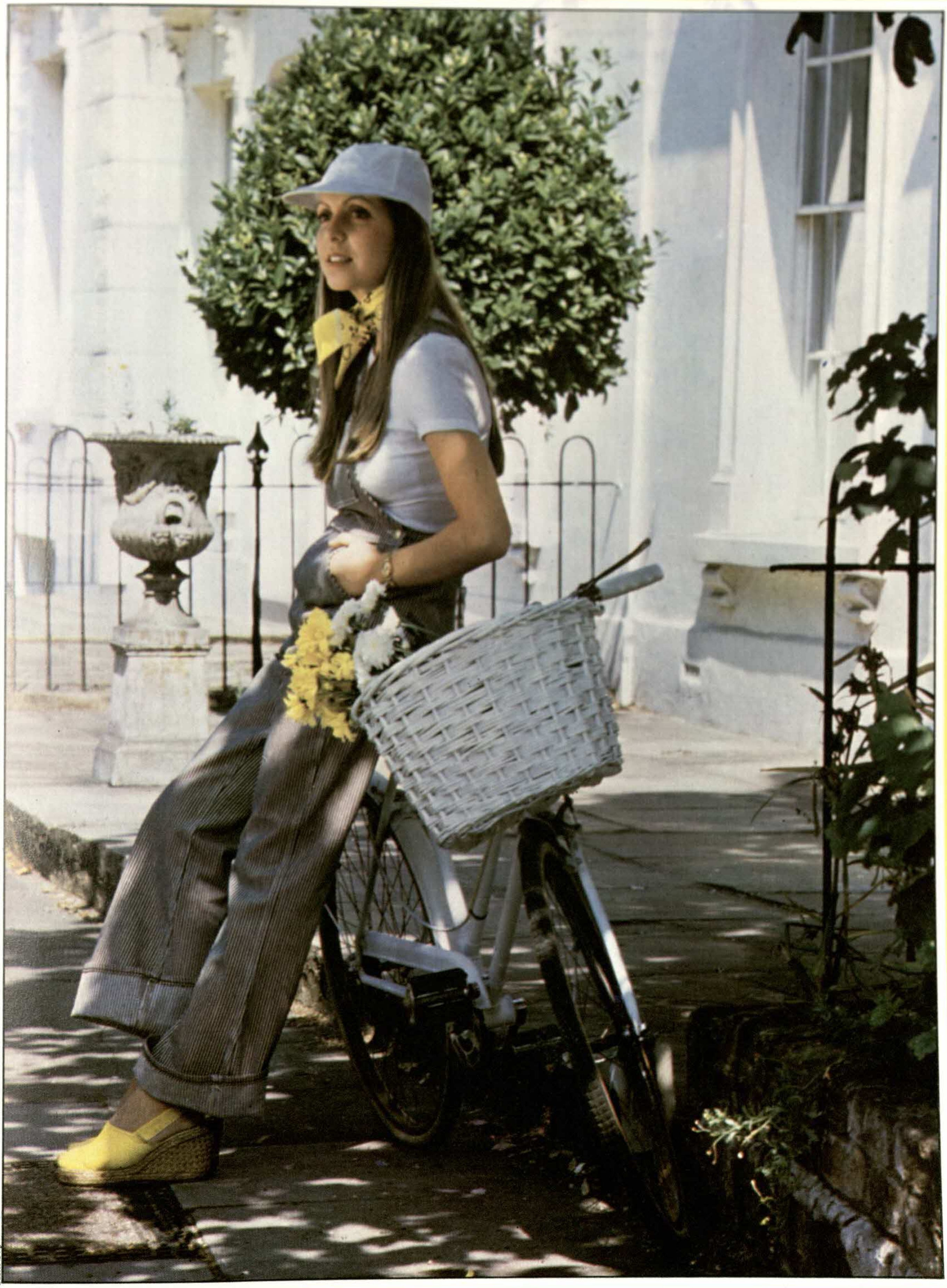
Soak the base and the sticks for pliability then insert the new sticks next to the existing ones. Trim the new sticks if they are too long.

When the sticks are in position and the work is dry, a coat of varnish or paint will help to hold everything in place.

If the basket has split at the point where the base and the siding meet, there is not much to be done and it would be a good idea to make a new basket.

Left: the natural colour of the willow on this bike basket has faded but a coat of gloss paint will improve its appearance and protect the willow from further wear.

Right: bicycle basket, painted and repaired by Barbara Maynard.



Kim Sayer

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A-27 *

Scented and floating candles

Wax 6

Some of the most attractive candles are based on flower designs. There are many ways of making flower candles, from the simple use of a commercial mould to modelling the wax by hand. By making your candles float or adding perfume to the wax, you can obtain that extra touch of originality and professionalism.

Holding a candle up to nature.

Steve Bicknell

Kim Sayer

Floating candles

Tiny candles will float of their own accord. Larger candles, however, such as the water-lily illustrated here will not float without the addition of a hollow piece of wax underneath, which forms an air pocket between it and the candle and makes the candle buoyant.

Water-lily

The water-lily was modelled in plasticine and a mould was then made of the shape using cold rubber such as Silastic. For instructions on making your own moulds and casting candles from them, see Wax chapter 4 page 1300.

☐ To make the water-lily float, pour molten wax, at a temperature of 82°C (180°F) into a saucer.

☐ Leave it for ten minutes and tip out all the liquid wax.

This will leave a wax saucer about 3mm ($\frac{1}{8}''$) thick.

☐ Stick this to the base of the water-lily candle with wax glue and secure it further by welding it: pass a hot nail with wax on the end around the join to make an air-tight bond.

Floating roses by David Constable add a glow to a summer's eve.

Perfumed candles

Scented candles can be produced with surprisingly little extra effort but do not attempt to use ordinary perfumes or toilet waters, since these are alcohol based and unsuitable for candles. Anything added to wax should be oil soluble and many oil-based perfumes specially made for scenting candles are available from candlemakers' suppliers.

The perfume should be added to the molten wax at the lowest temperature possible, just before pouring the mixture into the mould. The usual pouring temperature is about 82°C (180°F). The mixture should be well stirred so as to mix the scent thoroughly throughout the wax. If you add perfume sooner, some of it will evaporate and a great deal of the aroma will be lost.

If you wish to add perfume to candles which require a very high temperature such as sand candles (see Wax chapter 2, page 82), the perfume should be added at the topping up stage.

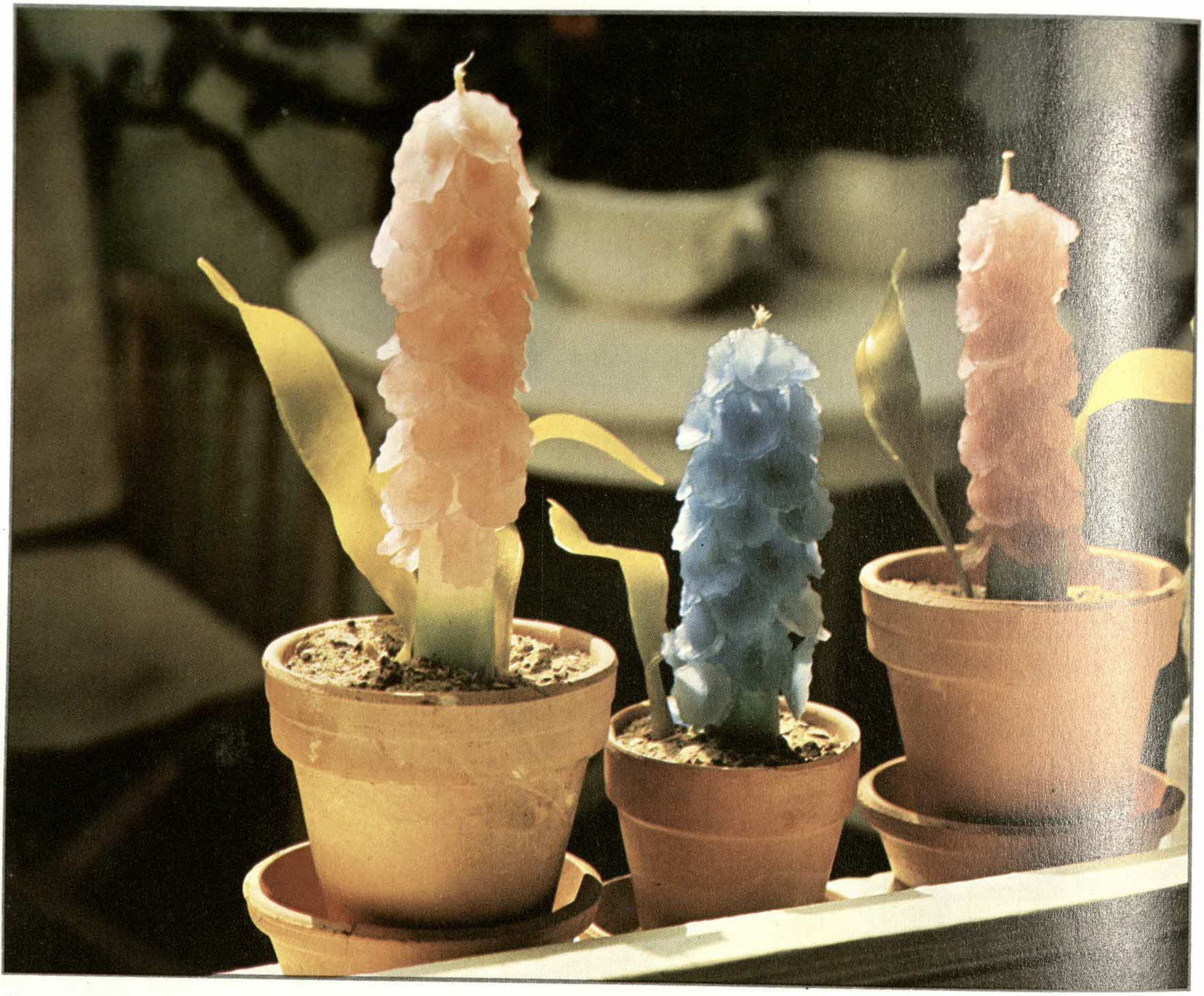
The quantity of perfume required to give a noticeable fragrance varies greatly from one individual to another. Anything from a few drops to a quarter of a teaspoonful per 200gm ($\frac{1}{2}$lb) candle may be needed depending on personal taste. If the candle is to be burned out of doors, as much as a teaspoonful may be necessary. Experiment with different scents and quantities to see what suits you best.

Be careful not to add too much perfume, however, as this may cause a heavy, overpowering smell. The oil in the perfume may also cause mottling on the surface of the candle.

Perfumed wax can be poured into any mould except rigid plastic because the perfume affects the plastic and will quickly make the mould useless.

If you *must* use a rigid plastic mould, first fill the mould with unscented wax and leave for about 15 minutes. Then pour out the liquid wax and you will be left with a thin shell of wax about 3mm ($\frac{1}{8}''$) thick in the mould.

Add the perfume to the wax which was tipped out (reheated if necessary) and pour it back into the mould which will be protected by the thin layer of unscented wax. (For information on commercial moulds, see Wax chapter 5, page 1722.)



Steve Bicknell

Blooms that burn, by David Constable.

Perfumed hyacinth

An enterprising and individual approach to making scented flower candles is to model the wax by hand to form petal shapes which are then stuck to a core candle.

You will need:

Wax dye.
Core candle.
100gm (4oz) paraffin wax.
Saucepan. Thermometer.
Metal baking tray. Palette knife.
Round, fluted pastry cutter.
Wax glue. Nail or screwdriver.

☐ Add a tiny speck of dye to the molten paraffin wax to obtain a delicate shade of the desired colour. (For information on using wax dyes, see Wax chapter 1, page 52.) Do not add stearin since this tends to make the wax less malleable.

☐ Heat to 82°C (180°F).

☐ Add a few drops of wax perfume and stir well.

☐ Pour the wax, at a temperature of 82°C (180°F), into a clean, rust-free metal baking tray to form a layer about 3mm ($\frac{1}{8}''$) thick.

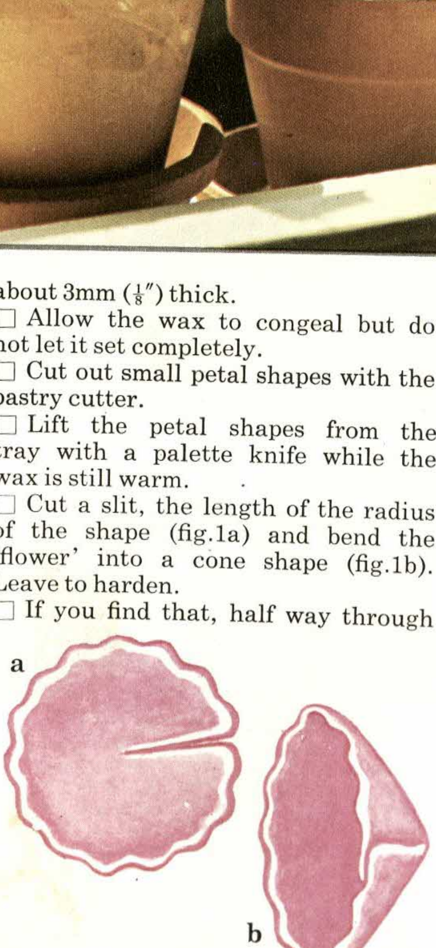
☐ Allow the wax to congeal but do not let it set completely.

☐ Cut out small petal shapes with the pastry cutter.

☐ Lift the petal shapes from the tray with a palette knife while the wax is still warm.

☐ Cut a slit, the length of the radius of the shape (fig.1a) and bend the 'flower' into a cone shape (fig.1b). Leave to harden.

☐ If you find that, half way through the process, the wax starts to get too hard to be malleable or to stick to the tray, warm the tray so that the wax softens.



1. *How to make petal shapes.*

☐ The flower shapes can then be stuck to the candle with wax glue. For a firmer, more permanent finish, they should then be 'welded' to the candle with a hot nail as described earlier.

☐ Hyacinth leaves are made in a similar way. Instead of cutting the wax into flower shapes, cut out long strips of green wax with a sharp knife. Twist and bend the strips into leaf shapes and fix them to the base.

Perfumed roses

The tiny floating roses (page 2603) are made, like hyacinths, from wax poured into a baking tray.

Cut out 'petals' freehand, mould into shapes and glue together. Paint with dye (Wax chapter 3, page 1276) using stiff brush, then paint on a thin coat of undyed wax to make colour permanent.

606 Cobalt Tint